‘All foods contain pesticides, and 99.99% are natural’: 8 critical facts about chemicals that help us grow food

In the United States, we live in an affluent culture whose standard of living is high compared to other nations. Yet, we fail to be grateful for the advances in food science and biotechnology we benefit from, which frees us from the day-to-day task of our food production. One of the major phobias consumers struggle with is related to pesticides.

> “It’s a war”
>
> – Steve Tebbets USDA Commodity Protection and Quality Research Entomologist

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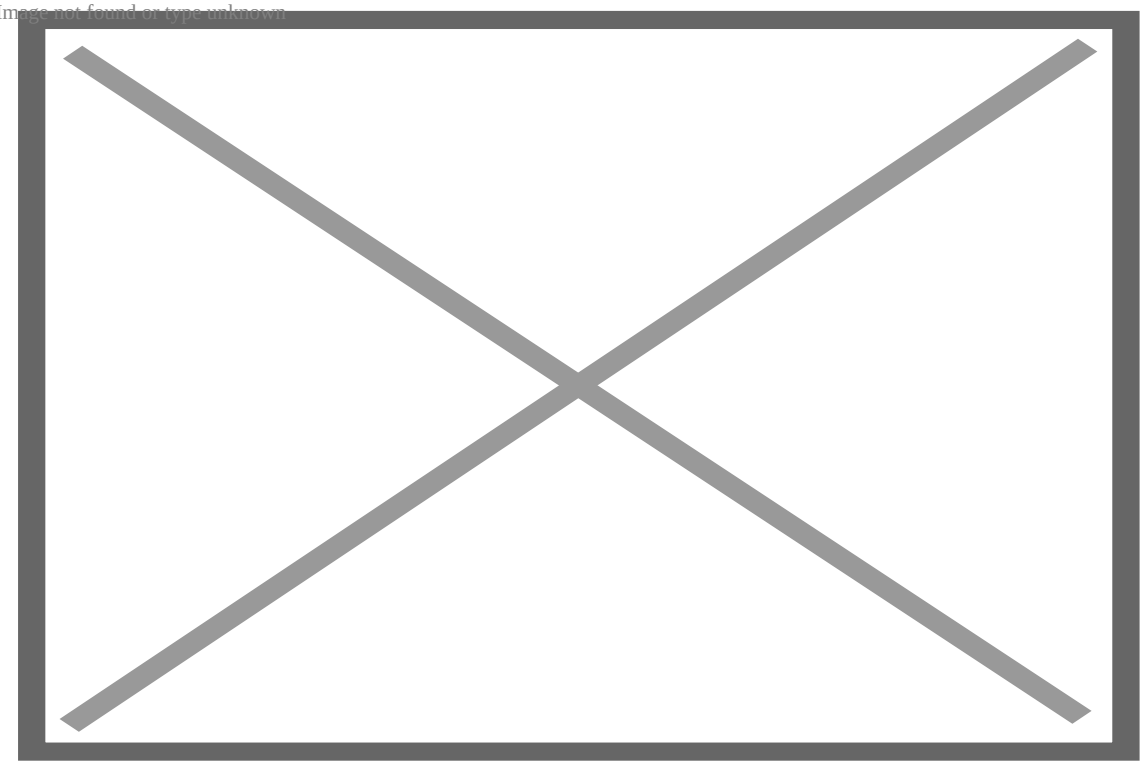

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Pesticides are used to protect the crops from 600 species of insects, 1,800 species of plants (weeds), and numerous fungi and nematodes species. During a recent phone conversation, Tebbets expressed his frustration with the ongoing consumer ignorance regarding the safety of pesticides, as did a grower who stated,

> “When will people start looking at pesticides and fungicides as they look at modern medicine and that they (pesticides) have improved our lives and health?”

Consumers who fear pesticides inherently are often not aware of the following:

- Nine out of the top ten most dangerous compounds on Earth are naturally? occurring. Natural does not mean safe. [1]
- All foods contain pesticides, and 99.99% of the pesticides you are exposed to are all natural. These natural pesticides can be equally carcinogenic using the same criteria to judge their synthetic equivalents that the average consumer has learned to demonize. [2]
- “Only a handful of the world’s most toxic major insecticides are significantly more toxic than caffeine.” [3]
- “There are no verified reports in the scientific literature of negative impacts on human health owing to the consumption of pesticide residues in food.” [4]
- The minuscule, if any, pesticide residue they are exposed to from conventionally grown crops. “In 2018, California Department of Pesticide Regulation collected? 3,666 produce samples, from 25 different countries representing 140 different types of fruits and vegetables. In 95% of samples, there was no detectable (43%) pesticide residue, and in the remaining 42%, the residue was below U.S. EPA tolerance levels.” ?
- This is consistent with the federal testing program. “The FDA found that 96.8% of domestic and 87.1% of imported human foods were compliant with federal standards. *No pesticide chemical residues were found in 47.1% of the*? *domestic and 47.2% of the import samples”* ?[my emphasis].
- Organics use pesticides that generally fall into the same categories of toxicity as synthetics. They are generally less effective, so more are needed to produce the same results, and “the truth is that many organic pesticides are more toxic than those developed in the lab.”
- “There was a twofold higher probability of Salmonella contamination in samples? from growers or vendors who stated that they used organic farming practices compared with samples from those using conventional farming practices.”

“The levels of pesticide residue in food are many orders of magnitude too low to have any health implications for consumers.” To illustrate this point, the reader is advised to use the Pesticide Residue Calculator to see how many servings a man, woman, teen, or child could consume and still not have any adverse effects from pesticide residues.

For example, using the highest pesticide residue accepted for grapes by the USDA, a man could consume 941 servings of grapes per day, a woman 672, a teen 538, and a child 269, without any effect. (A typical serving is a ½ cup) But even this level of exposure becomes more reassuring when you consider that more than 80% of the conventionally-grown produce falls well below this level.

As an illustration, a local grape grower, who grows both organic and conventional grapes, stated that his organic grapes had become infested with mites and needed to be treated with a synthetic insecticide. But, in doing so, he would lose his organic certification for the grapes and the acreage being treated for several

years. His dilemma was maintaining his organic status and losing most of his harvest or spray and salvage the grapes. He sprayed to salvage the grapes, but the irony was, the now non-organic grapes still had no pesticide residue after harvest.

If this information is so readily available, why do many consumers have such a strongly negative opinion of pesticides? Is it based upon science or the illusory truth effect I previously discussed? The repetitious drum beat portraying pesticides as a health threat comes from a wide variety of misinformed sources such as the media, which is as reliable as a Ouija board, popular trade books, the organic food industry, as well as many misinformed health professionals and "educators."

Consider these comments from a popular college-level health textbook, An Invitation to Health, Your Life, Your Future by Diane Hales: "You can avoid exposure to pesticides and other chemicals by opting for certified organic foods." As well as this statement: "the FDA [U.S. Food and Drug Administration] estimates that 33 to 39 percent of our food supply contains residues of pesticides *that may pose a long-term danger to our health* ??[my emphasis]," even though a 2018 press release from the FDA Commissioner Scott Gottlieb, M.D. states, "today we're releasing the latest set of results from our annual Pesticide Monitoring Program. Like other recent reports, the results show that overall levels of pesticide chemical residues are below the Environmental Protection Agency's tolerances, and *therefore don't pose a risk to consumers* ??[my emphasis]." I have been unable to find a college-level health or nutrition text which accurately covers this issue.

In the fairytale "The Boy Who Cried Wolf," it only took two times for the young shepherd boy to mislead the villagers before the villagers would no longer respond to his false cries. One can only assume that the villagers in this tale were not as gullible as many consumers who repeatedly allow themselves to be victimized by baseless fearmongering of the purported health threats of safe chemicals used to provide them their food, regardless of how many times these claims have turned out to be false.

The following was required reading for the students in my college nutrition course as a more in-depth review of pesticides' safety.

1. ACSH publication, Pesticide in Perspective
2. World Agriculture publication, Pesticides toxicity and public chemophobia: how toxic are modern-day pesticides?

Both can be found online at no cost.

References

[1] The Naturalness Fallacy James Kennedy, p. 17.

[2] Pesticide residues in food and cancer risk: A critical analysis, B. Ames In? Handbook of Pesticide Toxicology, 2nd ed. pp. 800–1.

[3] World Agriculture. Pesticide Toxicity and Public Chemophobia: how toxic are modern day pesticides? p. 9

[4] Ibid p.7

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