



Student Name:

Strawberries and Pesticides

Summary: Conventional (non-organic) strawberries can contain up to 20 pesticides. Why are so many pesticides used in growing strawberries? Do those pesticides hurt your health? What about the health of the workers who plant and harvest strawberries? In this lesson, you'll learn about the history and impacts of pesticide use in strawberry farming.

Vocabulary:

- **Pesticide:** any substance used for preventing or destroying pests in farming or gardening
- **Fumigant:** pesticides that produces fumes that are used to kill or prevent pests
- **Fungicide:** any substance used to kill or prevent fungi from growing
- **Residue:** the part of something that remains - in this case pesticides on fruit

READ: Strawberries used to be a seasonal fruit, available only during the spring and summer. Now, strawberries are available year-round in part because of the use of toxic chemical pesticides. These pesticides help prevent and kill pests that damage strawberry plants and strawberries. However, there are concerns about the health effects of consuming residual pesticides. Every year the Environmental Working Group releases their [Dirty Dozen™](#) list of fruits and vegetables with the most pesticide residue and most types of pesticide residue. [Strawberries have been at the top of that list](#) for the past five years. In addition to potentially harming consumers, pesticides affect farmworkers and communities that live near fields where pesticides are applied.

WATCH: This short animated video titled “A Brief History of the Modern Strawberry” from Reveal discusses the use of chemicals to kill insects, fungi, and other pests that damage strawberry crops. Watch the animated video here: <https://www.youtube.com/watch?v=fPxUIz5GHAE>

RESPOND: Respond to these questions about “A Brief History of the Modern Strawberry.”

- (1:24) What do fumigants and pesticides like chloropicrin do to funguses and worms?
- (3:08) Who is harmed by the use of fumigants?
- What is one fact you learned from the video that surprised you?

WATCH: This mini documentary from Earthjustice features organic strawberry farmer Jim Cochran talking about his transition away from using pesticides because of his concern for his health and the health of the workers on his farm. Watch here:

<https://www.youtube.com/watch?v=WKR1jLgDhJw>

RESPOND: Respond to these questions about the Earthjustice video.

- (0:33-1:15) Why did Jim Cochran want to stop using chemical pesticides?
- (1:58) What did Jim use instead of pesticides?
- (2:50) What are some of the benefits Jim's employees receive?

THINK: Consider your position on strawberry farming and your responsibility as a consumer. Write out your answers and consider talking with your family or friends about your perspective.

- The marketing advisors Jim talked to say that people don't care if strawberries have pesticides on them. **Do you care if your strawberries are grown with pesticides? Why?**
- In the Earthjustice video the narrator says, "Without fumigants, farmers say, our crops could fail. There's no clear alternative to these chemicals... it's how you can buy cheap strawberries any time of year." **Is having access to cheap strawberries year round worth the health impacts of fumigants and pesticides?**

Student Notes:

- Read more about Jim Cochran's pioneering work on developing organic strawberry farming practices in this [UC Santa Cruz Magazine article](#).
- Check out the [Strawberry and Labor Infographic Lesson](#) to learn more about the working conditions in strawberry fields and what you can do to support farmworkers to get living wages and safe working conditions.
- Try enjoying a strawberry through a [mindful eating exercise](#) that will have you slow down and focus in on every detail as you eat.
- Feeling creative? Try writing a poem from the perspective of a strawberry in this [I Am Poem Lesson](#).

References:

Pesticides + Poison Gases = Cheap, Year-Round Strawberries (May 14th, 2020). *Environmental Working Group*. Retrieved from <https://www.ewg.org/foodnews/strawberries.php>

A Brief History of the Modern Strawberry (May 14th, 2020). *Reveal*. Retrieved from <https://www.youtube.com/watch?v=fPxUIz5GHAE>

Growing Change (May 14th, 2020). *Earthjustice*. Retrieved from <https://www.youtube.com/watch?v=WKR1jLgDhJw>

Disclaimer: All videos and references are used for educational purposes only. The Edible Schoolyard Project does not endorse any brands, labels, organizations, or businesses included in videos or references.

Notes for Teachers/Parents

- This lesson supports students to learn the history of pesticide use in strawberry farming.
- This activity supports students to consider the impacts of the foods they eat.
- This activity supports students to understand the difference that organic agriculture can make in farm communities.