

DATA TALK

Pick + Chews

Grade Levels: 3-12

Duration: 5-15 min

How does the food we eat impact the environment? Analyze graphs about three different food groups and consider how you could build a meal that has less impact on our land, air, or water.



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Duration: 5-15 min

Concepts/Skills

Data analysis, visualizations, climate change, sustainability, pattern recognition, computational thinking

Objectives

Students will:

- Make observations using graphs.
- Ask questions about the graphs including how the information is represented, the data itself, and what it means.
- Reflect on how the food that they eat impacts the environment.



Data Talks

Data Talks are short 5-15 minute discussions in which students are shown a data visualization and asked what they see and what they are curious about. They are driven by these two core questions:

- *What do you notice?*
- *What do you wonder?*

Students are encouraged to consider the story that the graph is telling as they look at how the information is represented, the data itself, and what it means.

This engaging approach gets students reasoning and articulating their thinking. The exploratory nature of a data talk gives students a chance to use their own words rather than relying on specific statistical terminology. By sparking students' curiosity, the data and concepts become more relevant, driving meaningful critical thinking.

To learn more about Data Talks and find more examples, see:

- ["Data Talks,"](#) YouCubed website.
- ["What's Going On In This Graph,"](#) New York Times article.



Directions

Part 1:

- Have students take a look at the [three graphs provided](#) and consider the following questions.
 - *What do you notice?*
 - *What do you wonder?*
- Facilitate a discussion in which students are encouraged to share their thoughts and ideas in their own words.

Part 2:

- Share the [Background Information](#) about **Pick + Chews** and the data itself. Point out that the exhibit and the graphs invite you to build a meal by choosing ingredients from each category (proteins, vegetables, and toppings).
- Have students look more closely at the graphs.
- Lead a discussion which considers some of the following questions.
 - *What similarities (patterns) do you see in the data?*
 - *What differences do you notice?*
 - *What surprised you about the data?*
 - *Now imagine that you are going to build your next meal. What ingredient(s) would you choose from each category and why?*



Tips

During the discussion the educator might:

- Give students a chance to reflect quietly, put their thoughts on paper, or discuss with a partner.
- Ask follow-up questions:
 - *Where do you see that in the graph?*
 - *What do you think...*
 - *Why do you think that?*
- Clarify:
 - *I'm hearing you say...*
 - *I think...*
- Make connections:
 - Bridge academic terms and concepts.
 - Share their own thoughts and experiences.



Keep Exploring

Check out The Tech's [Data Science Lessons](#) or find more resources about sustainability at [Lessons and Activities](#).

Background Information

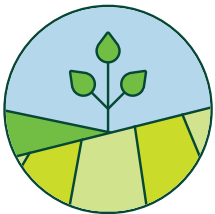
Pick + Chews

At this interactive exhibit within The Tech's [Solve for Earth exhibition](#), visitors build a meal and learn about the impact of their food choices. By iterating on their choices, they see if they can reduce the natural resources it took to make their meal.



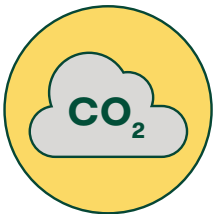
About the Data

This data visualization shows three categories of ingredients that can be used to create meals based on The Tech Interactive's Pick + Chews exhibit. The data was collected through various sources that completed a Life Cycle Assessment (analysis on what it takes to make it: growing, watering, fertilization, shipping, etc.) for the main ingredient(s).



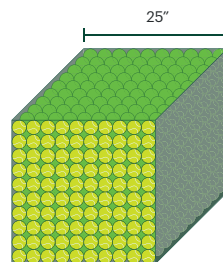
Land

How much space does food need? Finding space for plants to grow or for animals to live only accounts for part of the land required to cultivate food. Land is also needed to produce feed for animals and create products applied to plants to help them grow.



CO₂

Carbon Dioxide (CO₂) is a greenhouse gas which means it can trap heat in our atmosphere.



One pound (lb) of CO₂ would fill this cube*.
*Not drawn to scale



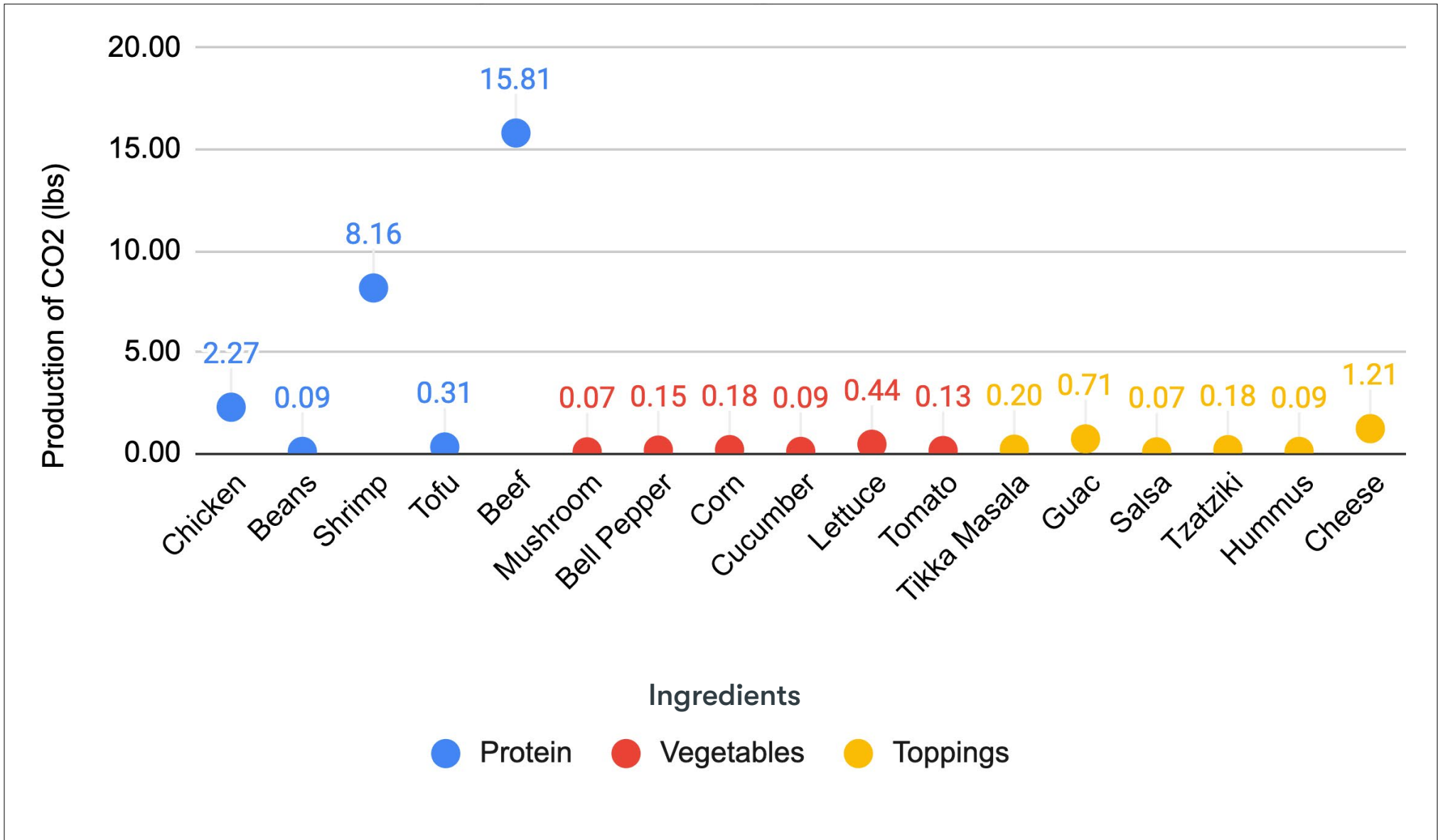
Water

We don't just drink water, we eat a lot of it. Most of our food sources are dependent on water. This includes the water required to sustain plants and animals, to grow feed sources for animals, and to clean facilities that process food.

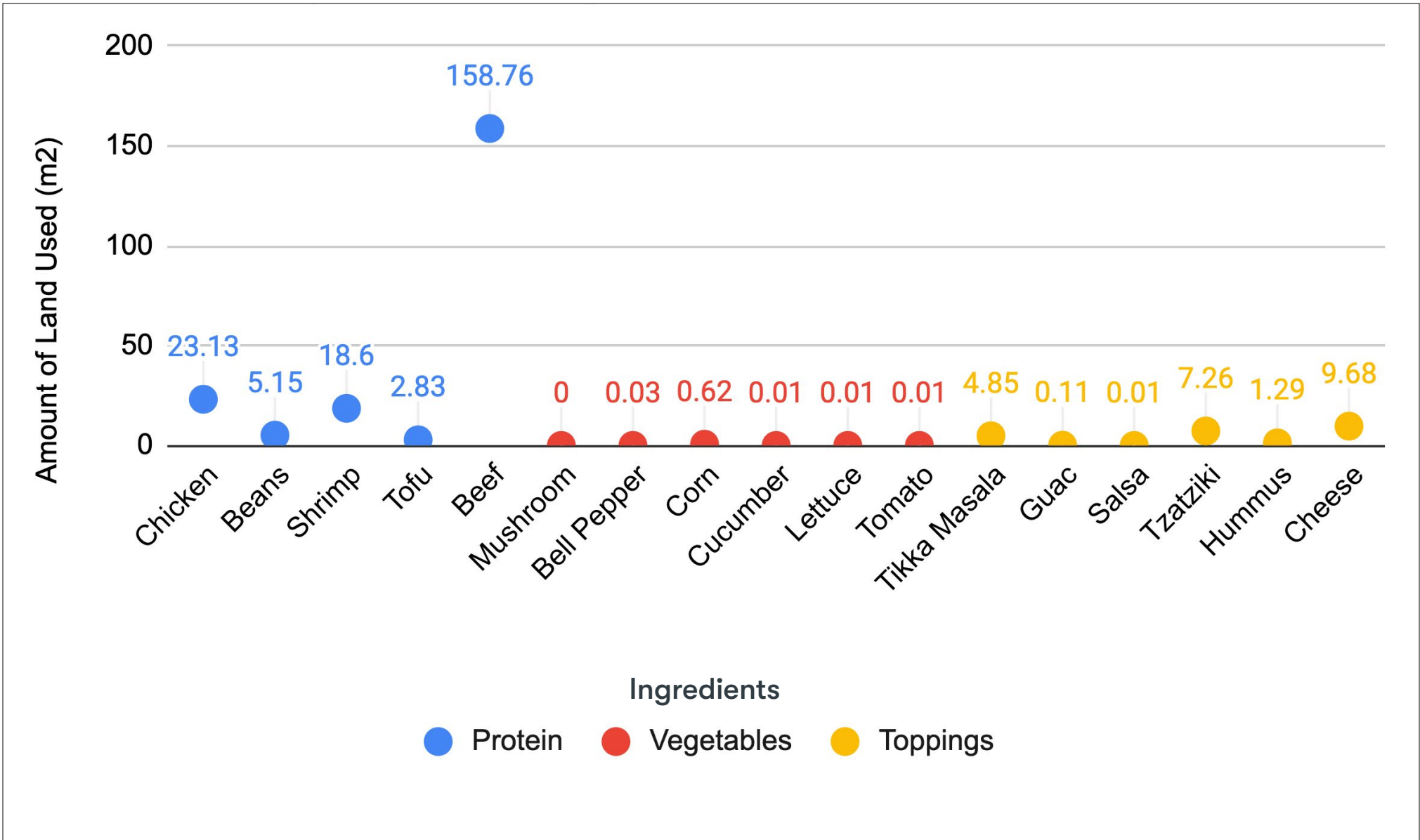


*Not drawn to scale

Production of CO2 by Different Ingredients



Land Used by Different Ingredients



Water Used by Different Ingredients

