

Animals in Our Diets Worksheet

Use the directions in the Animals in Our Diets Reading to calculate your agricultural protein footprint.

Step 1: How much animal protein do you eat?

1. List as many animal proteins as you can think of that people eat.

2. Follow the directions in the Animals in Our Diets Reading to complete Table 1.

Table 1. Your animal-based food diary

1. Source of animal protein	2. Amount consumed	3. Protein content	4. Amount of food consumed by livestock (lbs. of feed)

3. How much animal protein did you consume in 24 hours? ____ g
The USDA recommends that you eat roughly 50 g of protein per day. How close to this recommendation are you getting?

Step 2: Find your agricultural protein footprint

4. **Your smallest agricultural footprint.** The smallest agricultural footprint comes from eating only plant protein. How many pounds of beans would you have to eat to get the same amount of protein that you got from animal products? _____ lbs
5. **Your actual agricultural footprint.** How many pounds of feed (which could be beans) are needed to grow the animals that provided the protein you consumed? _____ lbs

6. Notice that animals consume more than 1 pound of food for every pound of protein they produce. Use what you know about cellular respiration to explain why this happens.

7. **Make a scale drawing of your agricultural protein footprint.** Use a sheet of graph paper. Let each square represent 0.1 lb feed or beans. In one corner, draw a line around the number of squares that represent the mass of beans equivalent to the animal protein that you ate. (See question 4.) Shade in that area.

In another part of the graph paper, draw lines around squares representing the amount of feed it would take to produce each of the different animal products that you ate. (See question 5.) Label each area you outline.

How does your actual agricultural protein footprint compare to that of the smallest agricultural footprint based on a bean diet?

8. By 2050, the world's population will be about 9 billion people – a 28% increase from today's population. However, almost all of the world's productive agricultural land is already in use. Think about what you learned from your class's study of your agricultural protein footprints. What are the implications of what you learned on this problem of feeding the world?
