

Why Eat Lower on the Food Chain?

Part A

1. List some examples of the environmental damage that results from raising animals for food.
2. List some reasons growing plants has a smaller effect on the environment.
3. While Canada and the US are exceptions, meat consumption in some of the developed world and most of the developing world is increasing. Suggest a reason for this observed trend in meat consumption.
4. Use what you know about the 10% rule to describe why this increase in meat consumption is not sustainable.
5. Continued increases in food production bring two questions. Give your opinion for each.
 - a. Will the rate of growth in food production keep up with population growth?
 - b. Will environmental problems such as erosion and soil degradation further decrease productivity?
6. Some experts have estimated that at the current rate of food production, the world can feed 7 billion vegetarians, 4 billion people on a 15% animal product diet, and 2 billion people on a 25% animal product diet (the typical North American diet). What do you think this tells us about our dietary choices?
7. As the human population continues to increase, potentially arable land to increase food production is being lost to either erosion or development. Why is this worrisome for our ability to feed everyone in the future?

Part B

A switch to a more vegetarian diet comes with not only environmental, but economic advantages as well. Follow the steps below to calculate the cost of eating meat compared to the cost of eating plants. Use grocery store labels to get the information you need to complete Table 1.

Table 1 Cost and Calories per gram for a variety of foods

Food	Cost/g	Calories/g	Cost/Calorie = cost/g divided by Calories/g
Rice			
Flour			
Beans			
Oats			
Beef			
Chicken			
Bacon			

8. Why was it important to calculate the cost per Calorie rather than just considering the cost per gram?
9. How did the cost per Calorie compare for foods from plant sources and animal sources? Why do you think there is such a difference?
10. How can we apply what we have learned about the cost per Calorie for different foods to producing enough food for everyone?