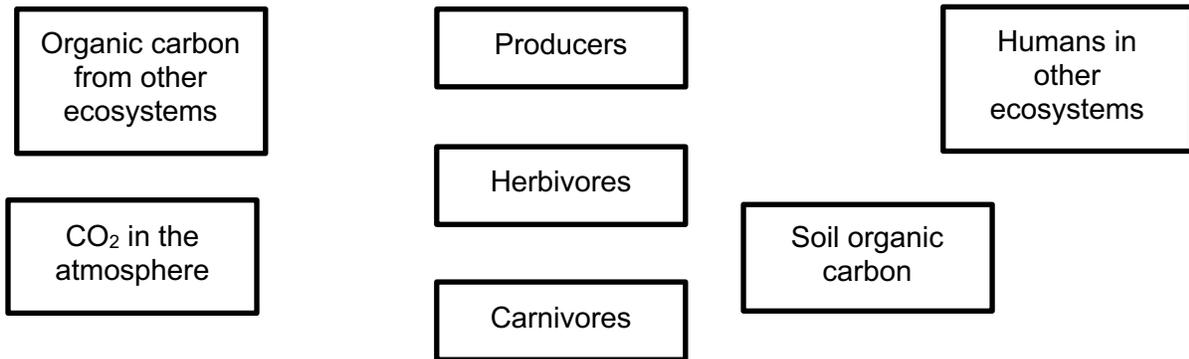


## 5.2 Beef Ecosystem Products and Services Worksheet

Answer these questions based on the Beef Ecosystem Services Reading, then share what you have learned with people who have read about other ecosystems.

### A. Carbon Fluxes in a Beef Ecosystem

1. The boxes below show the two main carbon pools in (or connected with) a beef backgrounding operation. Draw and label arrows to show the carbon fluxes for each of the processes in the table for Question 2.



2. Here are some processes that happen in a beef farm ecosystem. Describe how each process moves carbon from one pool to another.

<b>Process</b>	<b>How the Process Moves Carbon Between Pools</b>
The wind blows, carrying CO <sub>2</sub> into and out of the beef farm.	
Cows move and breathe	
Grasses chosen by humans grow	
The cows eat corn grain and hay from other farms.	
Humans eat beef from the cows	

3. The wind blows through the beef farm all year. If you could measure all the CO<sub>2</sub> in the wind blowing into the beef farm and compare it with all the CO<sub>2</sub> in the wind blowing out of the beef farm, what would you expect to find?

- a) There would be a little more CO<sub>2</sub> in the wind blowing in
- b) There would be a little more CO<sub>2</sub> in the wind blowing out
- c) There would be just as much CO<sub>2</sub> in the wind blowing in and the wind blowing out

Explain your answer.

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### **B. Ecosystem Services in a Beef Farm Ecosystem**

Explain some of the main ways that a beef farm provides materials and ecosystem services that are useful to humans.

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### **C. Carbon in a Beef Farm Ecosystem**

Around a beef farm ecosystem, how would you expect the amount of carbon dioxide in the air to change in the **summer**? The amount of carbon dioxide in the air around the beef farm (choose one):

- a. Would increase
- b. Would decrease
- c. Would stay about the same

Explain your answer. What might cause the amount of CO<sub>2</sub> in the air around the beef farm to change during the summer?

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**D. Something interesting that you learned**

What is something interesting that you learned about a beef farm ecosystem from your readings and discussion?

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