

Beef Sustainability, Nutrition & Quality



Name:

Date:

Class:

Part 1 – Taste Test – Comparing Differences

Instructions: Taste both beef samples (A and B). Rate differences on a scale of 1 (low) to 5 (high). Do not label one as “better.”

Attribute	Sample A	Sample B	Observations / Notes
Tenderness	_____	_____	_____
Juiciness	_____	_____	_____
Flavor	_____	_____	_____
Overall Taste	_____	_____	_____

Questions:

1. Describe how the two samples differ in taste and texture.

2. Before the reveal, which do you think is grass-fed vs. grain-fed? Why?

Part 2 – Beef Nutrition Comparison

Instructions: Use the table below to compare nutrition. Consider differences without deciding which is “better.”

Nutrient	Grass-Fed	Grain-Fed	Observations / Notes
Calories	180	210	_____
Protein (g)	22	22	_____
Total Fat (g)	8	13	_____
Omega-3 (mg)	50	25	_____
Vitamin B12 (mcg)	2.4	2.1	_____

These numbers are averages from USDA data and research studies. Actual values can vary by region, breed, and management.

Questions:

1. What differences do you notice between the two systems?

2. How could these differences influence a consumer’s choice, if at all?

Part 3 – Sustainability Data Analysis

Instructions: Compare grass-fed and grain-fed beef production using the table below. Consider trade-offs, not which is “better.”

Category	Grass-Fed Beef	Grain-Fed Beef	Observations / Trade-Offs
Land Use (acres/lb)	2.0	0.6	<hr/>
Water Use (gal/lb)	3,500	2,000	<hr/>
Feed Conversion (lbs feed/lb beef)	12	6	<hr/>
GHG Emissions (kg CO ₂ e/lb)	22	18	<hr/>

These numbers come from **life-cycle assessments and USDA/FAO data**. They represent **averages** and show trade-offs between production efficiency and system type.

Questions:

1. What trade-offs do you notice between the two systems?

2. How could a consumer’s priorities (taste, nutrition, sustainability) influence which system they support?

3. How could a consumer's priorities (taste, nutrition, sustainability) influence which system they support?

4. How might production system influence price or marketing of product?

Part 4 – Reflection

Questions:

1. Identify at least two trade-offs between grass-fed and grain-fed beef.

2. If you were a consumer, how would these trade-offs influence your choice? Explain using evidence from today's activities.
