## What’s Sustainability?

Producing safe, nutritious beef while balancing environmental stewardship, social responsibility and economic viability.

- **91% of Beef Farms and Ranches are Family Owned**
- **1/3 of U.S. Farms and Ranches Own Beef Cattle**
- **49% of beef are under 4 years of age**
- **2 - 6 Months**

## Typical U.S. Cattle Lifecycle

<table>
<thead>
<tr>
<th>Phase</th>
<th>DIET</th>
<th>DURATION</th>
<th>Nutrient Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cow-calf</td>
<td>Grass Other Human-</td>
<td>6 - 10 Months</td>
<td>Minimizes environmental impact</td>
</tr>
<tr>
<td>Stocker/backgrounder</td>
<td>Mostly Grass Other Human-</td>
<td>2 - 6 Months</td>
<td>Utilizes multiple economic resources</td>
</tr>
<tr>
<td>Finishing</td>
<td>Grain Other-Human-</td>
<td>4 - 6 Mos. Grain</td>
<td>Natural resources are used for every pound of beef produced.</td>
</tr>
</tbody>
</table>

## Same Beef, Fewer Cattle

Compared to 1977, today’s beef farmers and ranchers produce the same amount of beef with 33% fewer cattle.

- **How’d they do it?**
  - Better Animal Health & Welfare
  - Better Animal Nutrition
  - Better Animal Genetics

## The Stomach for the Job

Cattle have 4 stomach compartments, and the largest is the rumen, which is why cattle are referred to as ruminant animals.

- **1 RUMEN**
  - A cow’s stomach can be 40 to 50 gallons in volume
  - It is naturally filled with trillions of microbes that can break down human-inedible plants.

## Cattle Upcycling Super-power

The rumen microbes give cattle their upcycling super-power – cattle upgrade plants of little to no nutritional value to people to high-quality protein, micronutrients, and other important products.

## Fewer Cattle, Less Emissions

U.S. beef has one of the lowest carbon footprints in the world, 10 to 50 times lower than some nations.

- **Greenhouse gas (GHG) emissions from cattle only account for 2% of U.S. GHG emissions.**

## Going Against the Grain

Whether grass- or grain-finished, most of what cattle eat in their life is grass, and less than 10% of the lifetime feed of grain-finished cattle is grain.

- **Corn Fed to Cattle = 2% of U.S. cropland acres**
- **0.3% of total U.S. land area**

## Beef is a Nutrient-rich Food

A 3-ounce cooked serving of a composite, trimmed, retail beef cut contributes less than 10% of the Daily Value for 10 essential nutrients including protein, iron, zinc and many B vitamins.

## Sustainability is Bigger Than Carbon Footprints

Relative differences in carbon footprints between animal vs. plant foods don’t add up to significant GHG emissions differences at the national level.

- **For example, what would be the consequences if every American went vegan?**
  - Increased use of synthetic fertilizer
  - Increased soil erosion

## Reference list for Quick Facts on Beef Sustainability:

- NASEM, 2016. Nutrient Reqs. of Beef Cattle. 8th revised ed. DOI: https://doi.org/10.17226/21614
- USDA-NASS Quick Stats Tools. Available at: https://www.nass.usda.gov/Quick_Stats/