

**What would happen**  
if U.S. farmers and ranchers  
no longer used productivity-  
enhancing technologies to  
raise beef cattle?



*Safe, affordable beef through socially and  
environmentally responsible practices*

**1. To produce the same amount of beef currently available,  
farmers and ranchers would use significantly more natural  
resources and increase greenhouse gas emissions every year.**

- 10 million more cattle in the U.S. beef herd
  - Equivalent to doubling the number of beef cattle in Iowa and Kansas
- 3 million more fed cattle harvested
  - Would require four additional packing plants with a total capacity of 10,000 head per day to harvest these cattle
- 81 million more tons of feed
  - Enough feed to fill 1,010 Rose Bowl stadiums
- 17 million more acres of land for grazing and growing feed
  - Similar to the entire state of West Virginia
  - Similar to all the land in the country of Scotland
- 138 billion more gallons of water for producing feed and maintaining animals
  - Equivalent to the water used by 1.36 million U.S. households each year
  - Enough water to fill more than 200,000 Olympic-size swimming pools
  - Equivalent to filling 3.3 billion bathtubs
- 18 million more metric tons of carbon dioxide equivalent (CO<sub>2</sub>eq) would be released in the United States alone
  - Equivalent to the annual emissions from 3 million U.S. cars

# What would happen if U.S. farmers and ranchers no longer used productivity-enhancing technologies to raise beef cattle?

- 2. Using more natural resources to produce the same amount of beef will increase economic and environmental pressures, ultimately causing U.S. farmers and ranchers to produce less beef.**
  - Equivalent to imposing an 8.2 percent tax on U.S. beef farmers and ranchers
  - Within 15 years, would cause farmers and ranchers to reduce U.S. beef production by 17 percent
  
- 3. If less U.S. beef is available, other countries will produce more to satisfy global demand — ultimately using more natural resources and increasing greenhouse gas emissions. Within 15 years...**
  - These countries would increase exports to make up the loss in U.S. beef production
    - Canada — 36 percent increase
    - Brazil — 24 percent increase
    - Argentina — 11 percent increase
    - Australia — 5 percent increase
  - Brazil would lose 16.9 million acres of forest
  - 3.1 billion more metric tons of CO<sub>2</sub>eq would be released into the atmosphere
    - Equivalent to the annual emissions from 522 million U.S. cars — more than two times the cars in the United States
    - Primary sources of this additional CO<sub>2</sub>eq
      - 2.1 billion — Brazil
      - 283 million — Canada
      - 143 million — Argentina
      - 139 million — Australia

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Data supporting equivalence calculations available upon request  
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