Hamburger, Fries, and a Cola,
What Did It Take to Produce This American Meal?*

The meat came from cattle grazed initially on public or private land, and later fed grain. Some of the public lands in the western United States have been turned to desert by overgrazing, which happens when livestock eat so much vegetation that it no longer grows back. Streamside lands where cattle graze have been especially damaged.

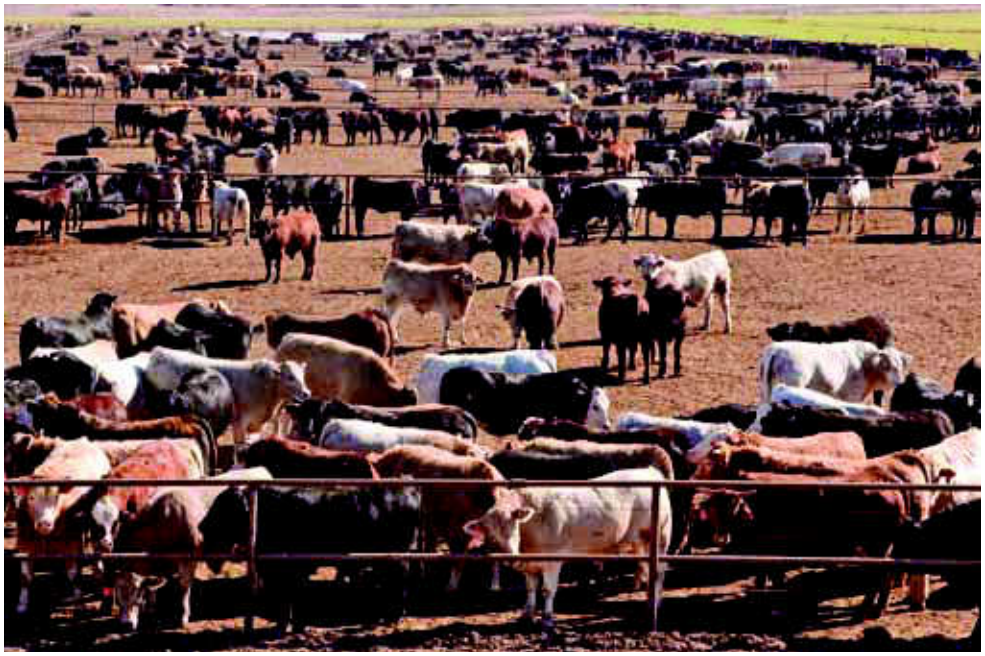
It took approximately 2 pounds of grain to produce that quarter pound of meat. Grain production from unsustainable farming methods results in topsoil loss due to erosion. Producing that grain also took substantial amounts of pesticides and fertilizers (half of all fertilizer in the United States is applied to feed corn for animals), some of which ran off into surface water or seeped into groundwater supplies. Commercial fertilizers have been linked to climate change. The creation of nitrogen fertilizers releases the greenhouse gas nitrous oxide, which can combine with other greenhouse gases in the atmosphere to make temperatures on Earth warmer.

At a feedlot, where cattle are fattened before they are slaughtered for food, a typical steer will eat about 3,000 pounds of grain to increase in weight 400 pounds. By the time the steer was finished in the feedlot, it took 600 gallons of water to build that hamburger patty. At the meatpacking plant where the steer was slaughtered and butchered, most of the workers receive low wages and no health insurance or vacation days. These workers face high injury rates.

Once slaughtered and processed, the meat was frozen, shipped by truck, kept cold, and then cooked on a grill using natural gas. Both the diesel fuel to run the truck and the natural gas grill require burning fuels that contribute to climate change.

The 5-ounce order of fries came from one 10-ounce potato grown in Idaho on half a square foot of soil. It took 7.5 gallons of water to raise that potato, plus quantities of fertilizer and pesticides, some of which ran off into the Columbia or Snake Rivers. Because of that, and dams that generate power and divert water for irrigation, the Snake River sockeye salmon is virtually extinct.

* Unless otherwise noted, environmental impacts adapted from *Stuff: The Secret Lives of Everyday Things* by John C. Ryan and Alan Thein Durning (Seattle: Sightline Institute, 1997), and human impacts derived from *Fast Food Nation* by Eric Schlosser (New York: Perennial, 2002).



©ISTOCKPHOTO/DHUGHES9

Beef cattle in a feedlot

Farmers receive a small fraction of the price of the fries, maybe 1 or 2% of the price a customer paid for the fries. Most potatoes are now grown on large farms that require large potato-harvesting equipment. This reduces the number of potato farmers that are required to produce potatoes.

The potato was dug with a diesel-powered harvester and then trucked to a processing plant where it was dehydrated, sliced, and frozen. The freezing was done by a cooling unit containing hydrofluorocarbons (HFCs), some of which escaped into the atmosphere where they may contribute to global climate change. The frozen fries were then trucked to a distribution center, then on to a fast-food restaurant where they were stored in a freezer and then fried in corn oil heated by electricity generated by hydropower.

The meal was served in a fast-food restaurant built on land that was originally forest, then farmland, and then converted to commercial/industrial uses as the city expanded. Many of the workers in the fast-food restaurant are teenagers and young adults who work part-time for minimum wage.

The cola came from a Seattle processing plant. It is made of 90% water from the Cedar River. The high-fructose corn syrup came from Iowa, as did the carbon dioxide used to produce the fizz, which is produced by fermenting corn. The caffeine came from a processing plant that makes decaffeinated coffee. The cola can was made from one-third recycled aluminum and two-thirds bauxite ore strip-mined in Australia. It came to Washington State on a Korean freighter, and was processed into aluminum using an amount of energy equivalent to a quart of gasoline. The energy came from some of the same dams mentioned earlier that have contributed to an estimated 97% decrease in the salmon runs of the Columbia Basin.

Cola has been called "liquid candy" because of its high sugar content. In the late 1950's a typical fast-food cola was 8 ounces. Today a large cola might be 32 ounces, containing over 300 calories and a third of the daily maximum amount of sugar recommended for an adult. High amounts of calories and sugars can lead to conditions like obesity and diabetes. In the United States an estimated 34% of adults are obese.[1] Cola is extremely profitable for fast-food restaurants. It costs a restaurant just 9 cents to buy the syrup needed for a medium cola that sells for around $1.29.

©ISTOCKPHOTO/LANGDU

Fresh potatoes in the field

The typical mouthful of food consumed in the U.S. traveled 1,200 miles for us to eat it. Along the way, it required packaging, energy, roads, bridges, and warehouses. Both people and machines were required for each step of the food production.

1 National Center for Health Statistics, "Health, United States, 2008," www.cdc.gov/nchs/data/hus/hus08.pdf, 32.