



THE ENVIRONMENTAL IMPACT: LOCAL FOOD KENTUCKY

OBJECTIVES

1. Where does our food come from?
2. What role do fossil fuels play in your diet?



World map



Where in the world does grocery store food come from?

Antarctica

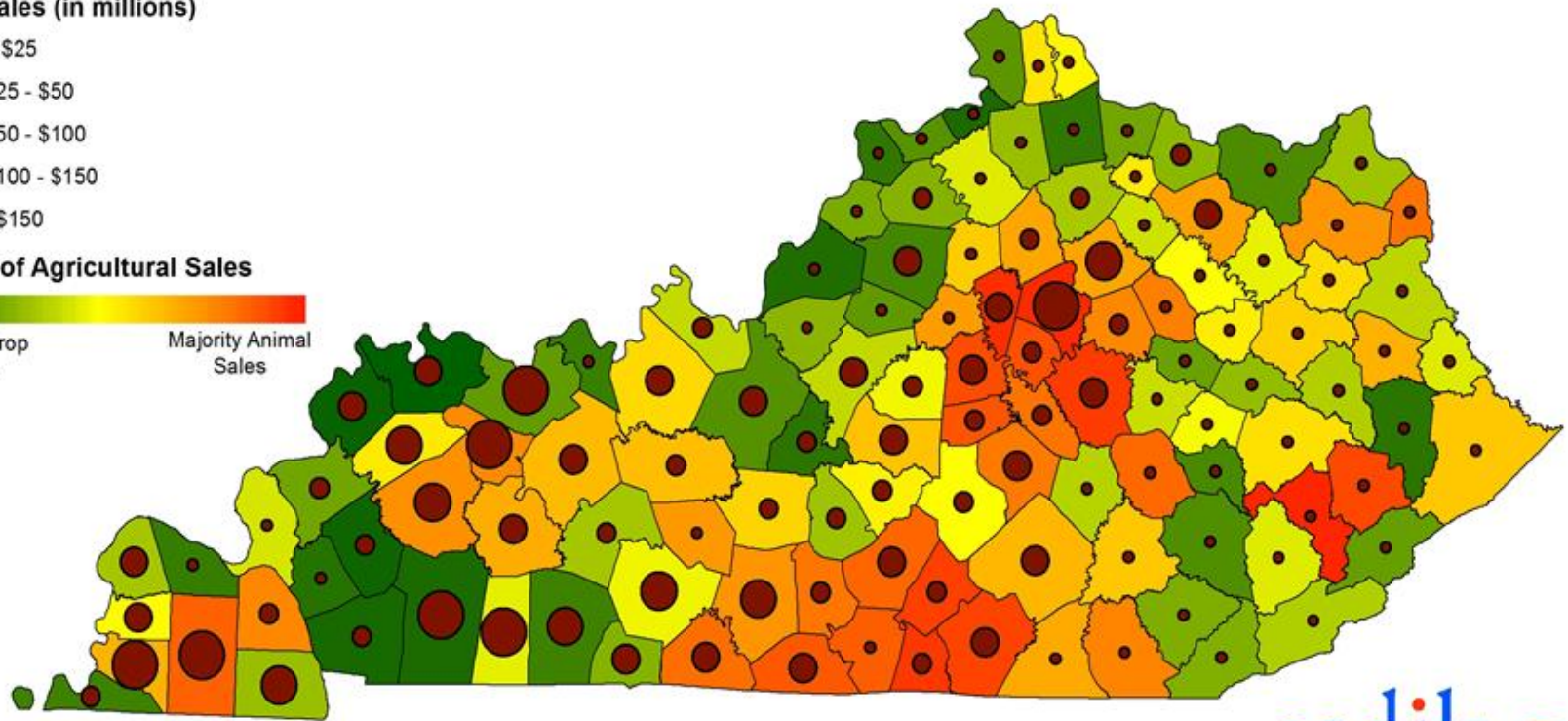
WHERE DOES FOOD COME FROM IN KENTUCKY?

Kentucky Counties by Volume and Source of Total Agricultural Sales

Total Sales (in millions)

- < \$25
- \$25 - \$50
- \$50 - \$100
- \$100 - \$150
- > \$150

Source of Agricultural Sales



WHERE DO WE GET LOCAL FOOD IN LEXINGTON?



- Lexington Farmers Market
- Bluegrass Farmers Market
- KY Proud restaurants
- School/Community/Back-yard Gardens
- Some at local grocery stores



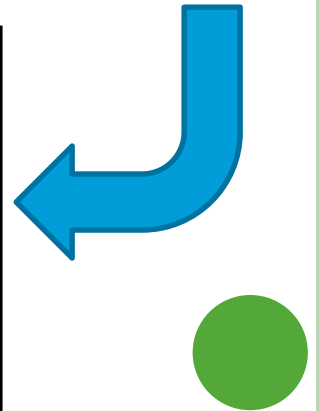
World map



What do FOSSIL FUELS have to do with this?

Antarctica

WHAT ARE FOSSIL FUELS?



FOOD MILES:

WHAT ARE THEY?



AIRPLANES USE THE EQUIVALENT OF 165 GALS. OF GAS PER TON MOVED PER 1000 MILES

AIRPLANES EMIT ABOUT 4056 LBS. OF CARBON PER TON MOVED 1000 MILES



TRAINS USE THE EQUIVALENT OF 7 GALS. OF GAS PER TON MOVED 1000 MILES



TRAINS EMIT ABOUT 132 LBS. OF CARBON PER TON MOVED 1000 MILES



WHY SHOULD I CARE?



BOATS USE THE EQUIVALENT OF 4 GALS. OF GAS PER TON MOVED 1000 MILES



BOATS EMIT ABOUT 97 LBS. OF CARBON PER TON MOVED 1000 MILES



TRUCKS USE THE EQUIVALENT OF 30 GALS. OF GAS PER TON MOVED 1000 MILES

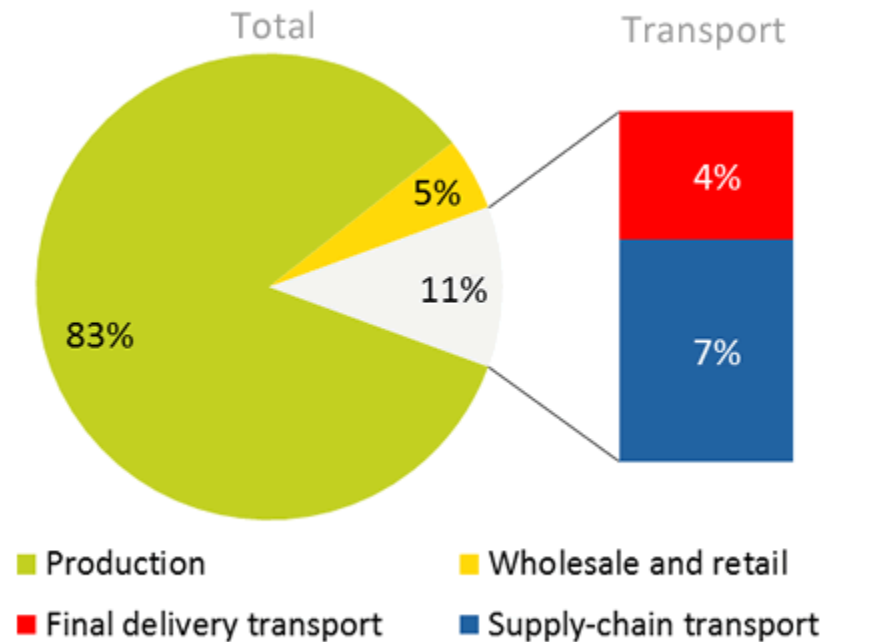


TRUCKS EMIT ABOUT 666 LBS. OF CARBON PER TON MOVED 1000 MILES

This poster indicates roughly how much energy each form of transportation uses and how much carbon dioxide it produces. As any car driver knows, these figures depend a great deal on how the vehicle is driven, the vehicle's condition and technology, and the weather. These are some of our best guesses of industry-wide averages based upon the existing literature.

WHAT MOVES OUR FOOD?

Food Emissions Breakdown (%)

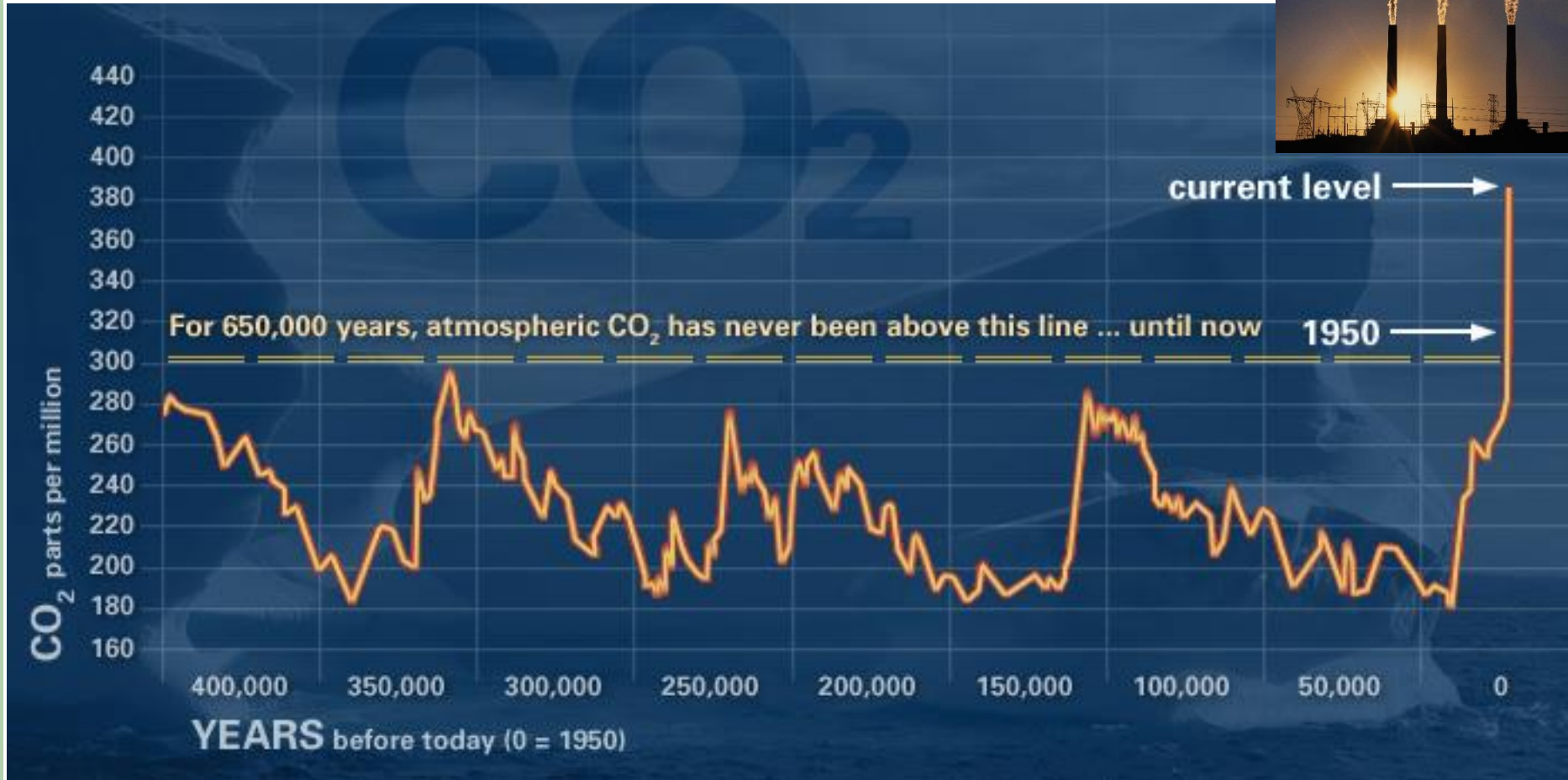


Source: Weber and Matthews 2008

Shrink That Footprint



ATMOSPHERIC CO₂ IS NOW HIGHER THAN IT'S BEEN FOR 650,000 YEARS AND INCREASING RAPIDLY

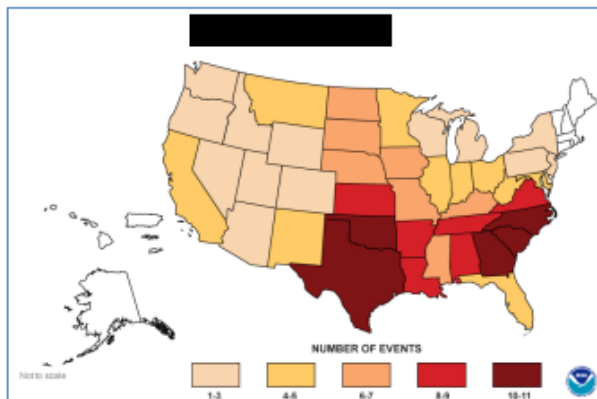


This graph, based on the comparison of atmospheric samples contained in ice cores and more recent direct measurements, provides evidence that atmospheric CO₂ has increased since the Industrial Revolution. (Source: NOAA)

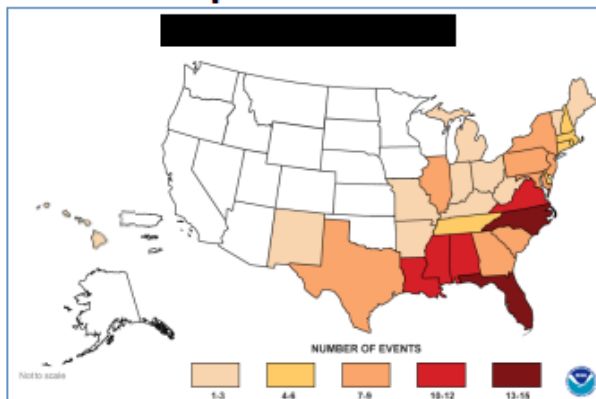
Extreme Events are Increasing

U.S. Billion-Dollar Weather and Climate Disasters: 1980 – 2011

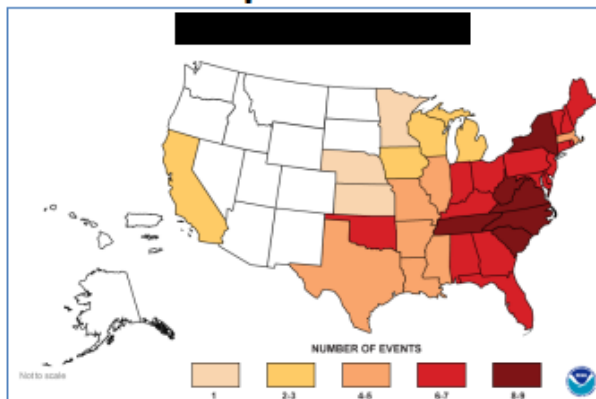
Drought and Heatwaves



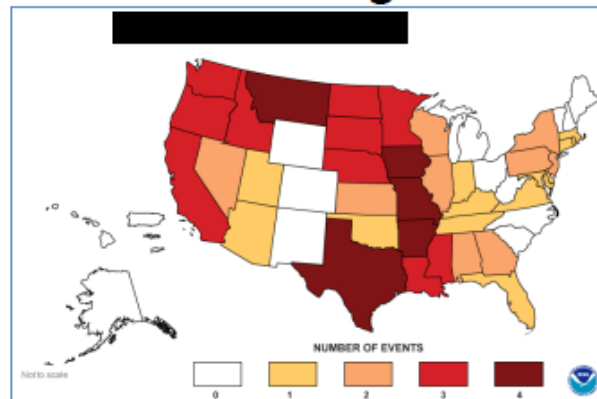
Hurricanes and Tropical Storms



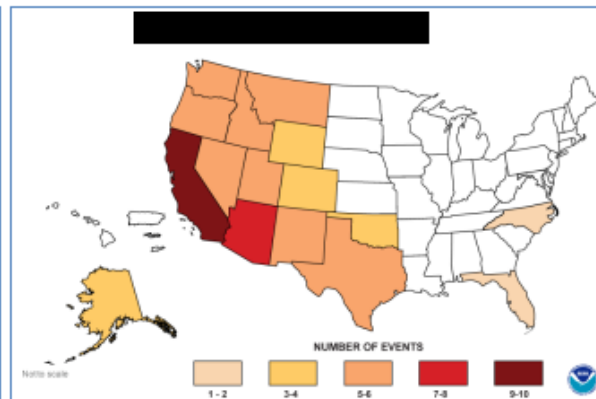
Winter Storms and Crop Freezes



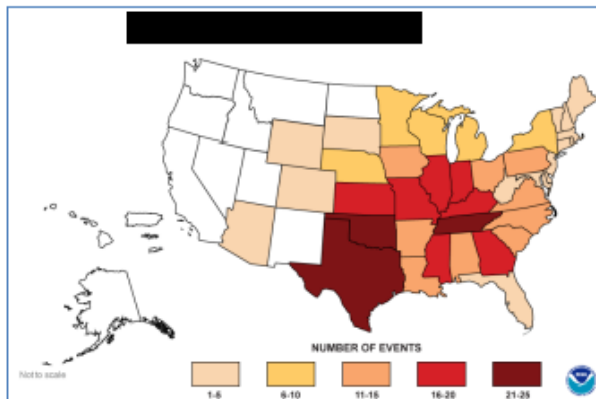
Flooding



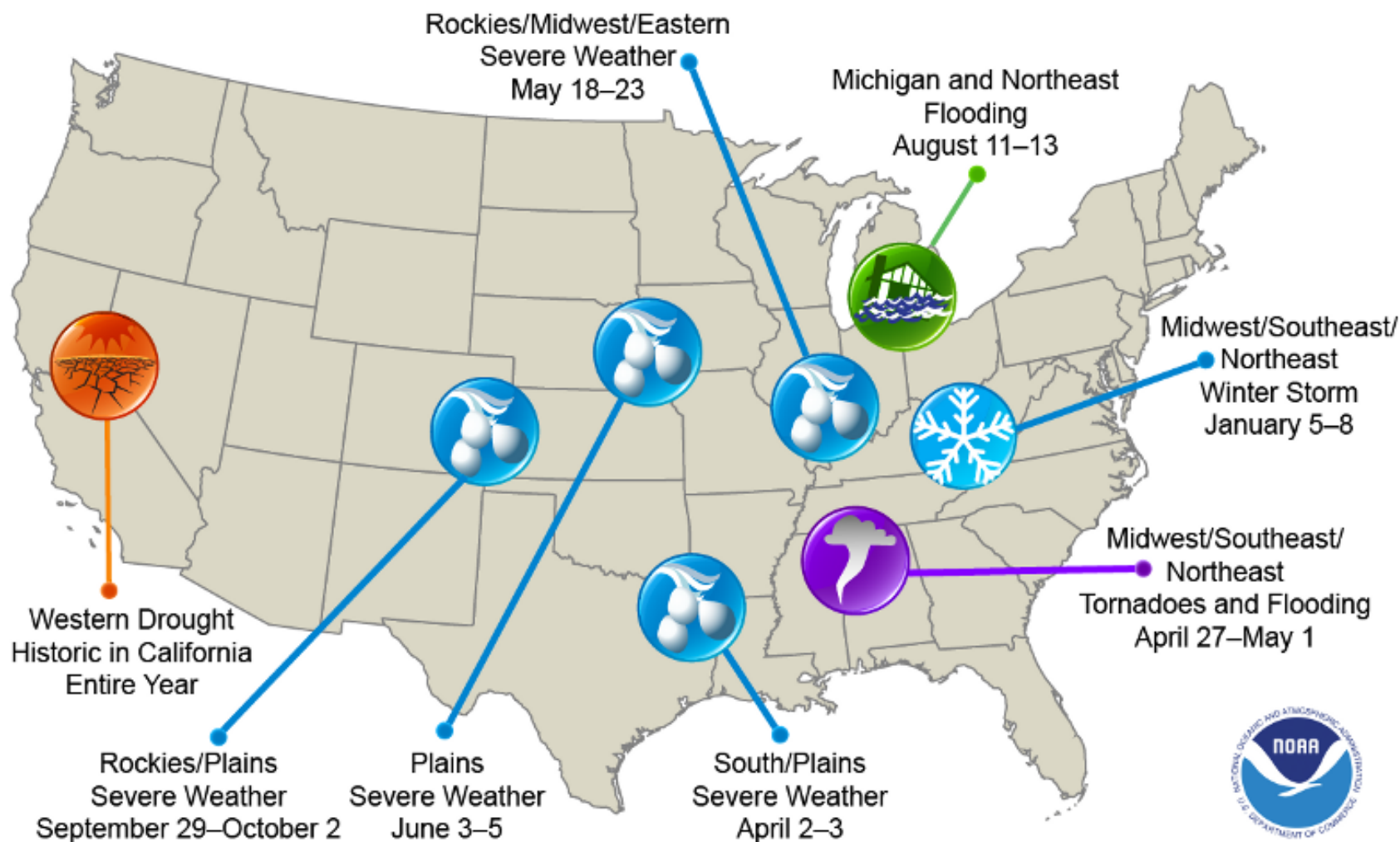
Wildfires



Severe Local Storms

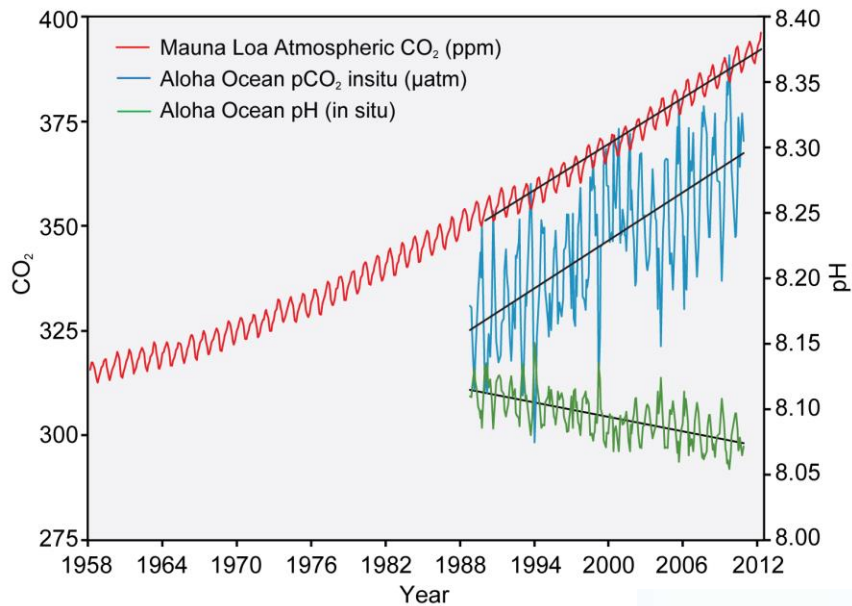


U.S. 2014 Billion-Dollar Weather and Climate Disasters

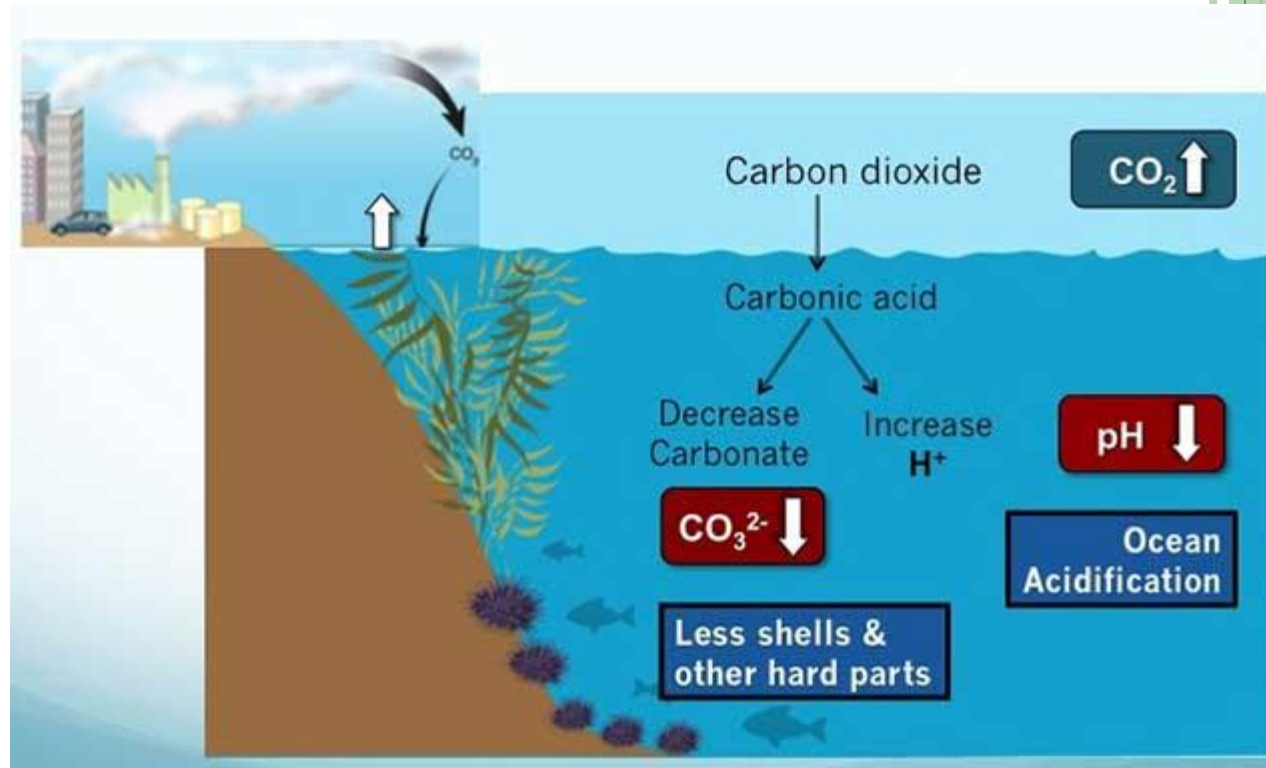
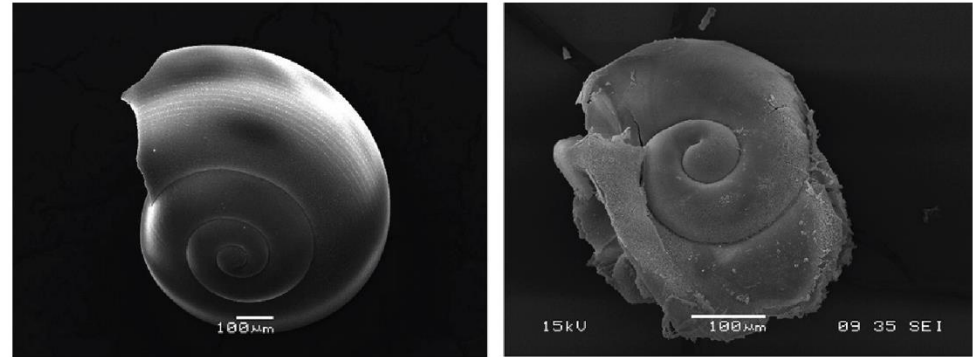


This map denotes the approximate location for each of the eight billion-dollar weather and climate disasters that impacted the United States during 2014.

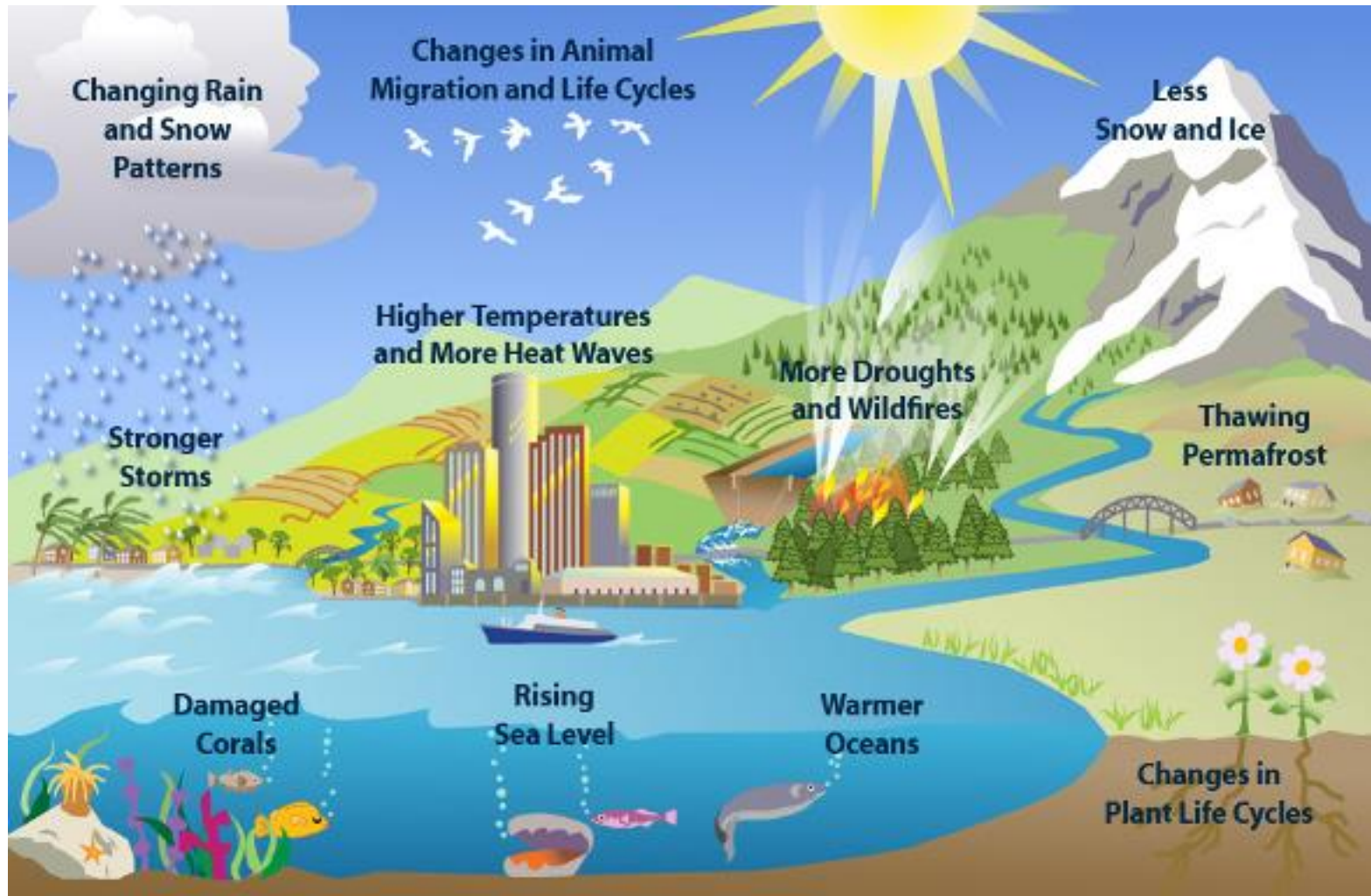
As Oceans Absorb CO₂, They Become More Acidic



Shells Dissolve in Acidified Ocean Water

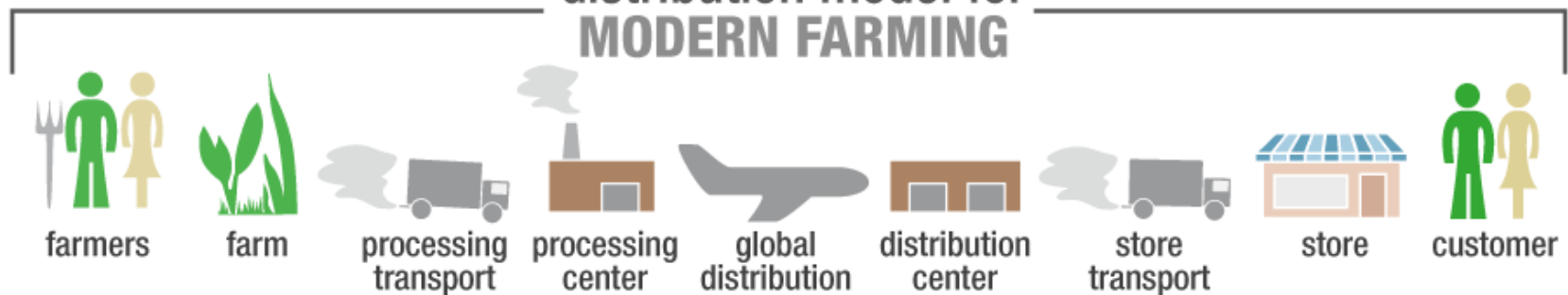


WHY ARE FOSSIL FUELS HARMFUL?



WHICH ONE IS A BETTER SOLUTION?

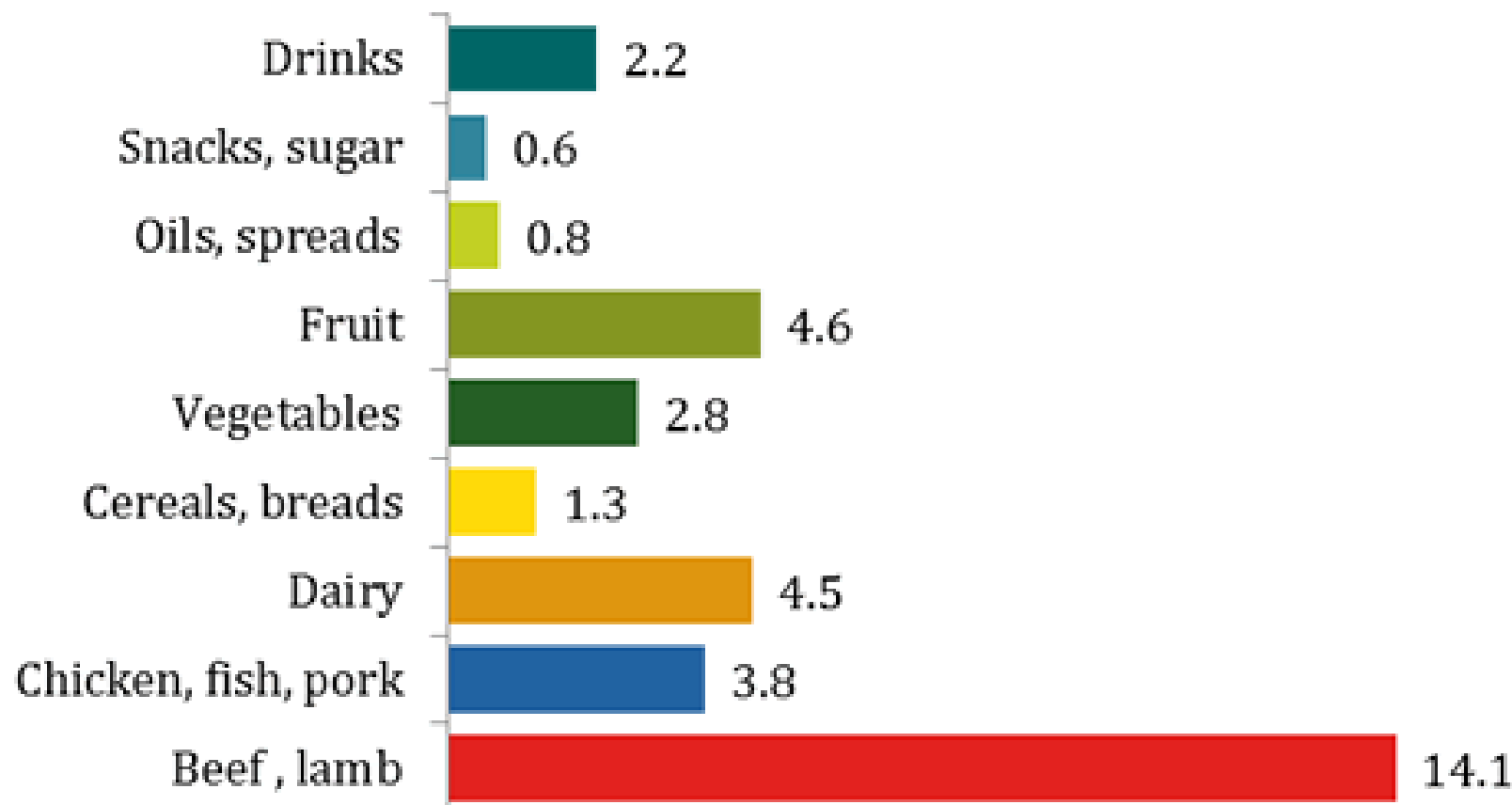
distribution model for **MODERN FARMING**



distribution model for **NATURAL FARMING**

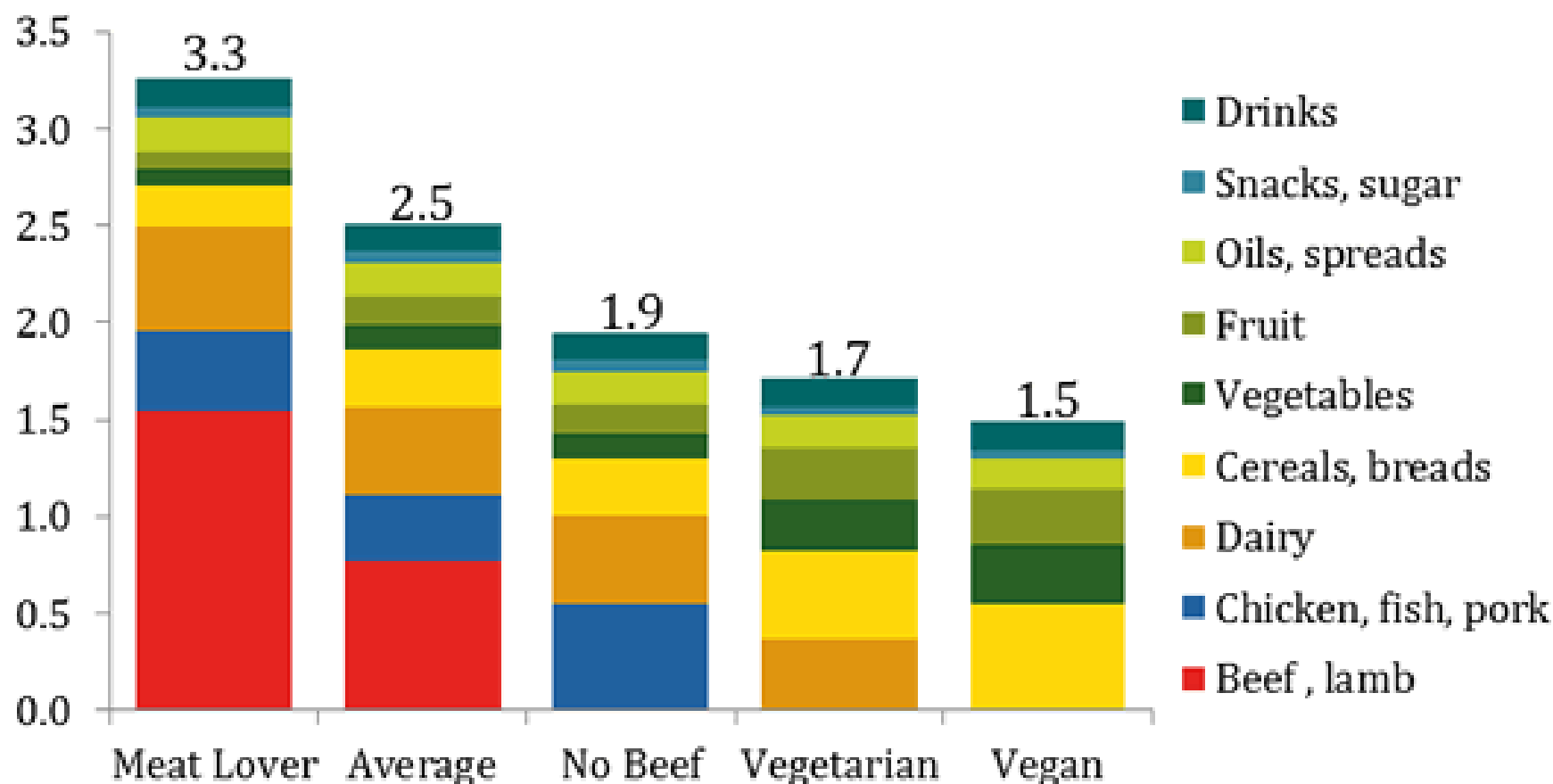


Carbon Intensity of Eating: g CO₂e/kcal



Note: Figures are grams of carbon dioxide equivalents per kilocalorie of food eaten (g CO₂e/kcal). Intensities include emissions for total food supplied to provide each kilocalorie consumed. This accounts for emissions from food eaten as well as consumer waste and supply chain losses. All figures are based on typical food production in the USA. Estimates are emissions from cradle to point of sale, they do not include personal transport, home storage or cooking, or include any land use change emissions

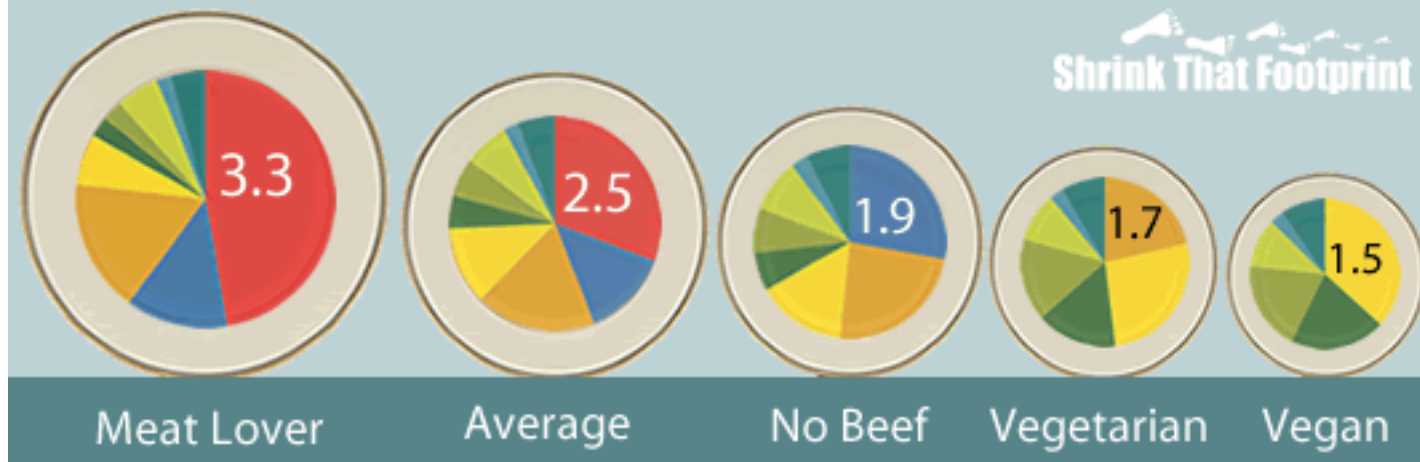
Foodprints by Diet Type: t CO₂e/person



Note: All estimates based on average food production emissions for the US. Footprints include emissions from supply chain losses, consumer waste and consumption.. Each of the four example diets is based on 2,600 kcal of food consumed per day, which in the US equates to around 3,900 kcal of supplied food.

Sources: ERS/USDA, various LCA and EIO-LCA data

Comparing Carbon Foodprints (t CO₂e)



LOCAL IS BETTER!



Local (Kentucky) Food

- More sustainable practices
- Less transportation
- Less pesticide use
- Balances local demand
- Less environmentally harmful equipment
- Less packaging



Imported Food

- Less sustainable practices
- Dependent on fossil fuels
- More transportation
- More pesticide use
- More packaging



RESOURCES

- <http://www.environmentforbeginners.com/content/view/106/1/>
- <http://www.uvm.edu/vtvegandberry/factsheets/buylocal.html>

