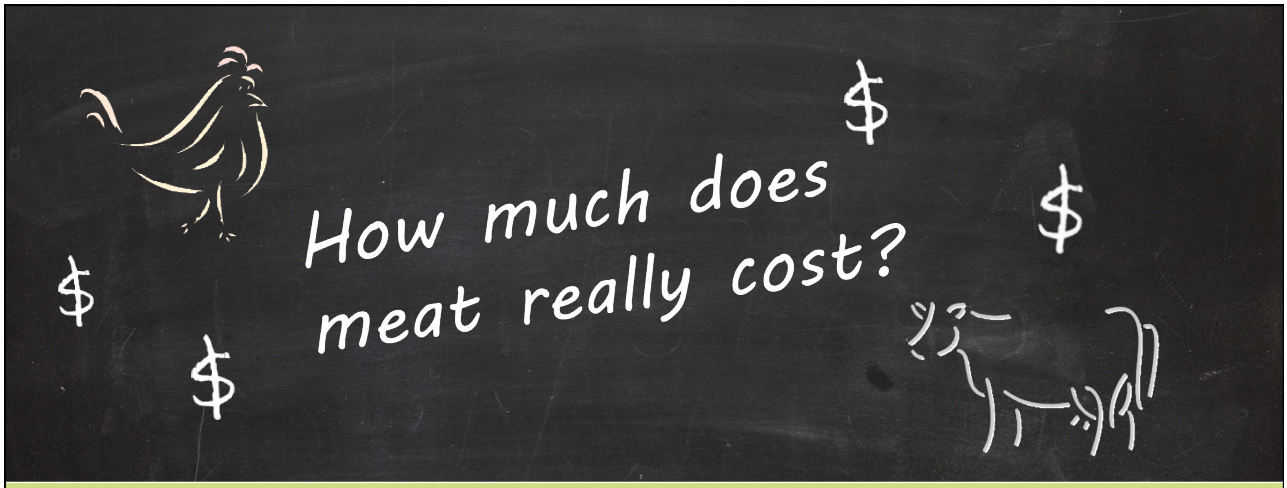


The Economics of Meat Consumption

Jon Haveman, Ph.D. | Marin Economic Consulting

This is Brian

On a limited budget, he purchases a lot of ground beef because it's cheap and versatile

The average American consumes 195 pounds of meat (beef, poultry, fish) per year

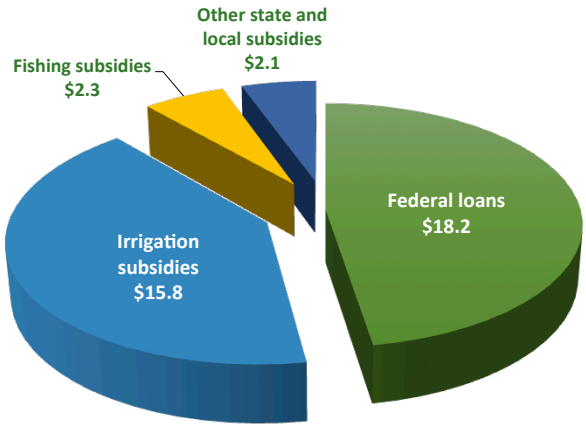
Average Cost Ground Beef:

3.77/lb = $721 per year

But what is the real cost?

3

Meat Production is Subsidized



Total: $38.4 Billion

Federal Loans
Direct support of farmers – loans, insurance, research, marketing assistance

Irrigation Subsidies
Central Valley farmers pay fees that are 2% of what Los Angeles residents pay for water

Fishing Subsidies
Direct payments to farmers that reduce costs and encourage overfishing

Other State and Local Subsidies
Primarily irrigation

4

Why does it matter?

- Subsidies reduce the price of meat
- Meat becomes a larger share of consumption
  - When the price of something is lower, people consume more of it
- Plus there are added costs to meat production

Did you know? Each year, USDA-managed programs spend $550 million to bombard Americans with slogans like these urging us to buy more animal foods.

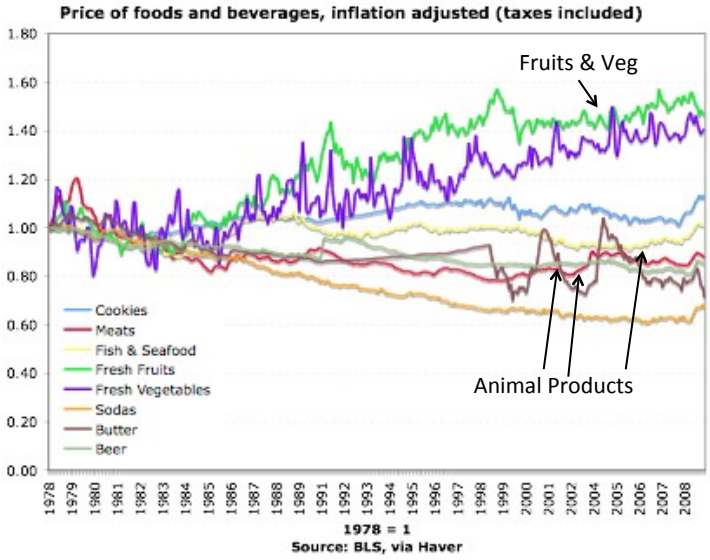
5

Price Comparison

Animal products have gotten cheaper while fruits and vegetables have gotten more expensive.

The price of meat is in red

Subsidies and production "efficiencies"



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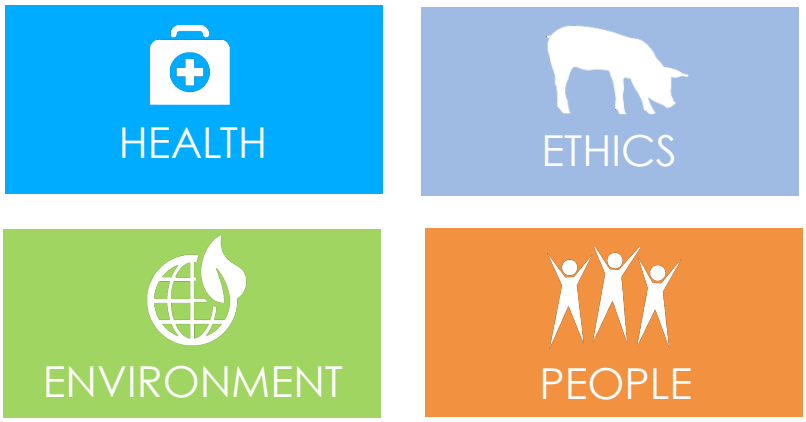
Externalized Costs



7

ENVIRONMENT

Soil Erosion

Livestock production is responsible for 55% of US soil erosion, resulting in flood damage and siltation of reservoirs

Climate Change

Livestock responsible for at least 17% (and perhaps up to 51%) of human-made greenhouse gas emissions

Pesticides and Fertilizers

Poisons and nutrients damage lakes and ground water, affecting bird losses, drinking water, toxic resistance in pests

Real Property Devaluation

Proximity to CAFOs – fumes

Manure Remediation

- **Ground water in 1/3 of US states is contaminated with animal waste**
- **Damage is proxied by cost of leaky dam repair and cost of spreading manure across farmland**

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California Water Usage

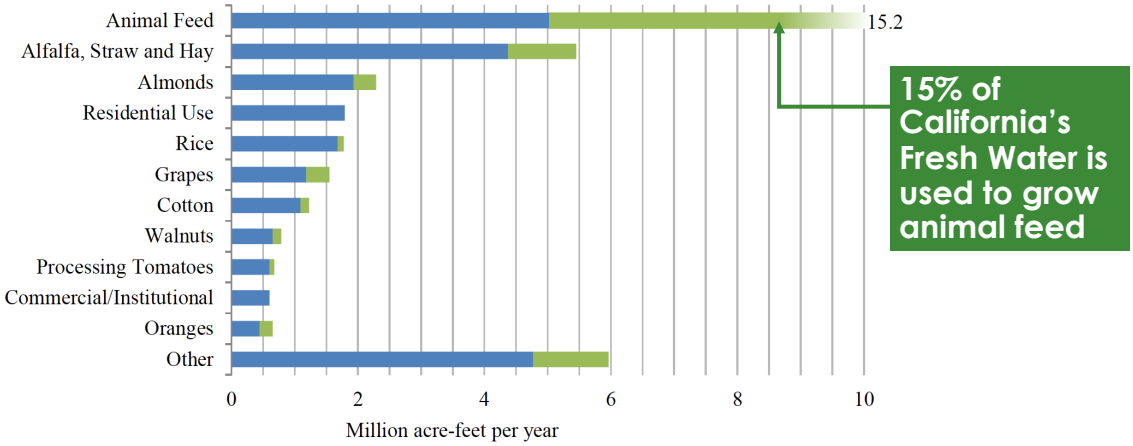
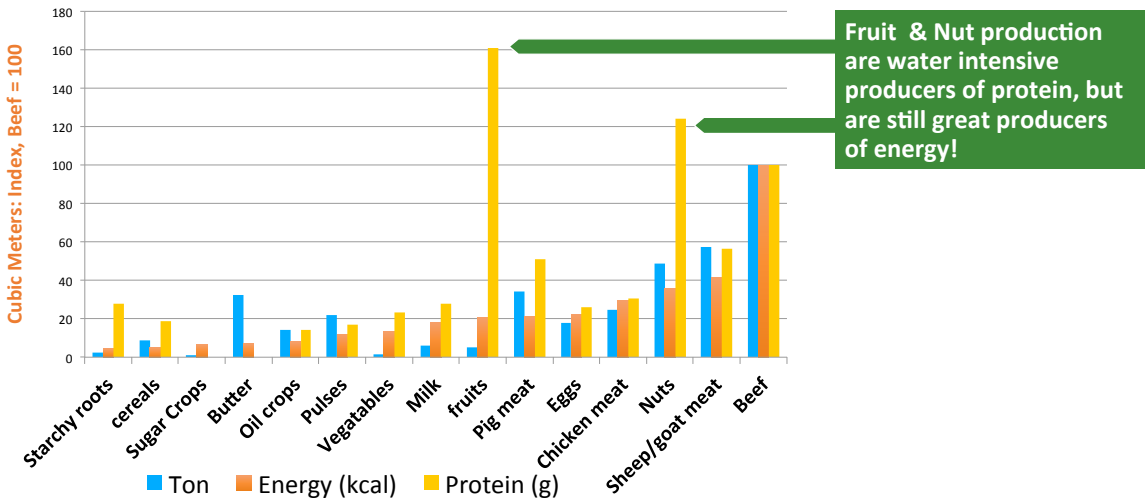


Figure 7. Blue and Green Water Footprints of Goods and Services Produced in California, by Product
Note the scale discontinuity for animal feed

9

Water Consumption: Relative to Beef



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Type of Water Matters Too

Blue water is fresh surface and groundwater, in other words, the water in freshwater lakes, rivers and aquifers

Food Source	All Water Gallons/Ton	Blue Water Gallons/Ton
Vegetables	85,000	11,300
Starchy Roots	102,200	4,200
Beef	4,000,000	145,000

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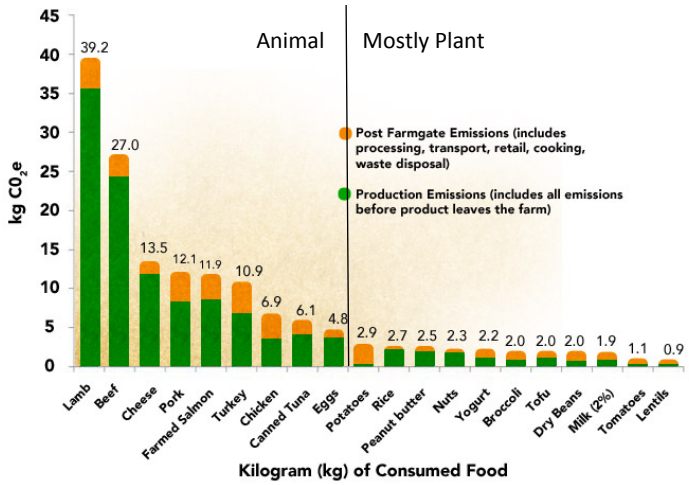
Greenhouse Gas Emissions

Animal based proteins clearly have a larger footprint. Need information on emissions per unit of protein to be sure.



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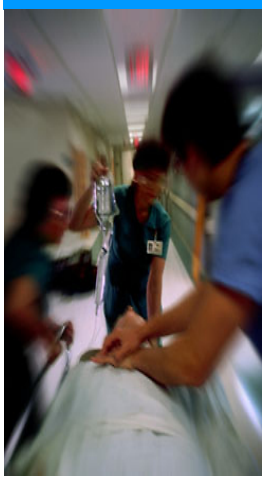
HEALTH



Heart Disease

12 servings of chicken/month, 3 times more likely to suffer from hearth disease - Americans eat 30 servings/month

Cancer

Meat eaters prone to: prostate, breast, colon

Diabetes

One daily serving of red meat = 35% higher chance of type 2 diabetes

Antibiotic Resistance

Farm animals fed 28 million lbs of antibiotics/year
Low level dosages foster new and virulent strains of bacteria

Food Poisoning

Fecal contamination in 4/5 red meat samples
E coli in 9/10 chicken breasts

The Cost on our Health

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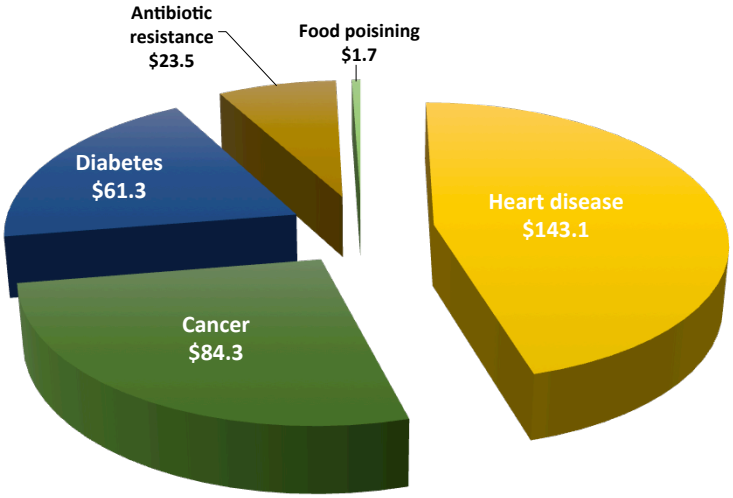

Total: $314 Billion

The Economics of Meat Consumption

Meat can impact how long you live

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"There is clear evidence that regular consumption of red meat, especially processed meat, contributes substantially to premature death"

" A daily serving of cold cuts or hot dogs was associated with a 50% increased risk of developing diabetes"

"One serving a day increment in red meat intake during adolescence was associated with a 22% higher risk of premenopausal breast cancer"

Taken from research conducted by Dr. Frank Hu of the Harvard School of Public Health

The Economics of Meat Consumption

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Number of animals killed each year for food in U.S.:

- **9.1 billion land animals**
  - » 8.7 billion chickens
  - » 400 million cows, pigs, ducks, and turkeys
- **53.5 billion aquatic animals**
- **875 million died of disease, injury, suffocation, transport, or other malaise**

Animal deaths per person in U.S.:

- **28 land animals per year**
- **175 aquatic animals per year**
- **15,000 over a lifetime**

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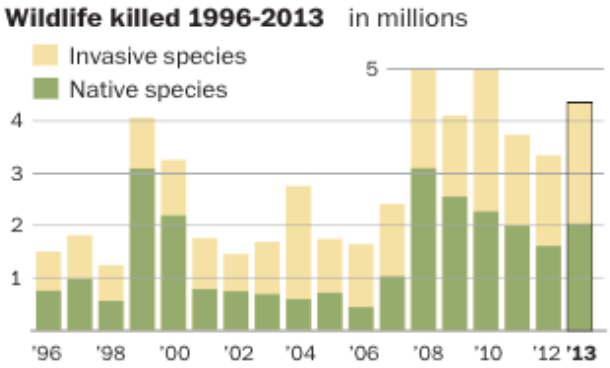
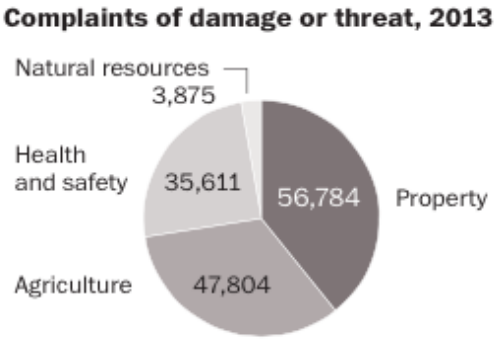
Government Provided "Wildlife Services"

Millions of native and invasive animals killed by government at taxpayer expense.





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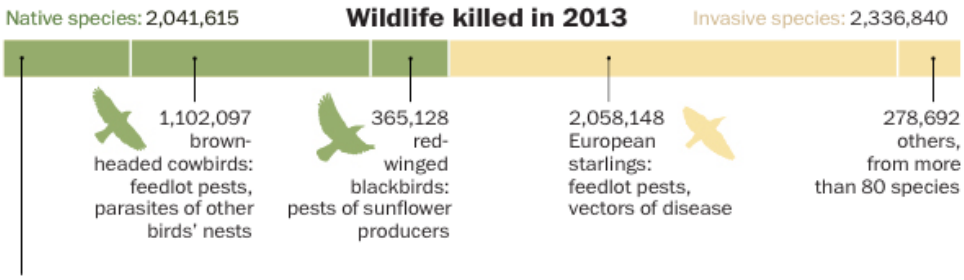
Government Provided "Wildlife Services"



574,390 others, from more than 600 native species, including:

Coyotes	75,326	Herring gulls	5,528	Black bears	419
Beavers	24,390	White-tailed deer	4,810	Barn owls	194
Canada geese	23,153	Cliff swallows	2,378	Ospreys	57
Cormorants	18,656	Killdeers	2,122	Eastern bluebirds	21
Common ravens	9,121	Bobcats	866	Snowy owls	5
Vultures	6,498	Great blue herons	631	Flying squirrel	1

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The Ethics of Factory Farming

Over 99% of farm animals in the U.S. are raised in factory farms, which focus on profit and efficiency at the expense of the animals' welfare

Unnatural growth
Fast and disproportionate growth due to selective breeding causes ailments including chronic pain, mobility problems and heart problems.

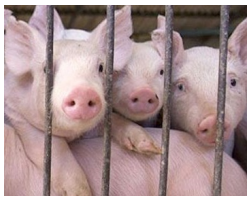
Non-therapeutic medicating
So they can survive the filthy conditions and grow faster, some industries feed their animals antibiotics and/or hormones.

Unnatural reproduction
Many female farm animals spend virtually their entire lives pregnant, putting them under chronic strain.

Absent veterinary care
Most factory farms deny animals individualized veterinary care, including humane euthanasia.

Surgical mutilations
Many farm animals undergo painful mutilations to their tails, testicles, horns, toes or beaks, without painkillers.

Shortened lives
Factory farmed animals are generally slaughtered at "market weight" well before the end of their natural life spans.



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PEOPLE

Family Farm has disappeared

A handful of companies dominate each livestock sector exert tremendous control over the prices farmers receive, and they micromanage the day-to-day operations of many farms. The real price that farmers receive for livestock has fallen steadily for the last two decades.

Tough Working Conditions

Called " One of the worst jobs " - working in a slaughterhouse is physically and physiologically demanding. The combination of long hours and repetitive motion directly leads to increased risk of injury.

Not sustainable

Some 40% of the world's land surface is used for the purposes of keeping all 7 billion of us fed – of that, 30% is used to support the chickens, pigs and cattle that we eventually eat. As the population increases, we will not have adequate land to continue our current farming methods and ensure everyone is fed.

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How do we lower the COST?

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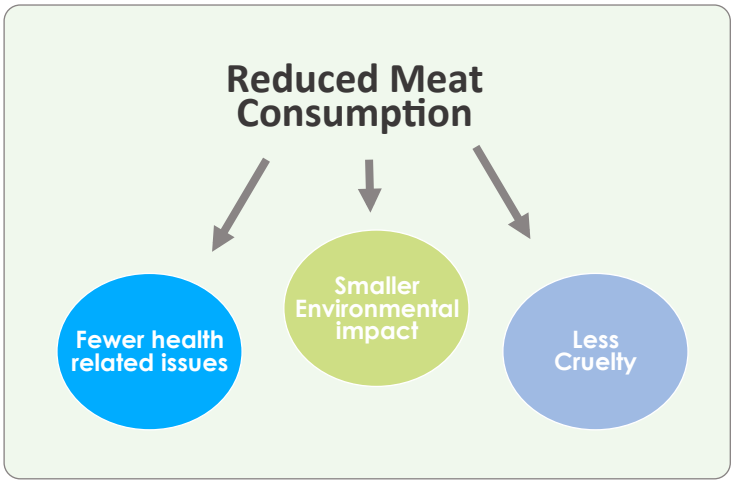
Lower the cost, Raise the price !

SUBSIDISING MEAT PRODUCTION

Eliminating subsidies reduces other external costs



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Lower the cost, Raise the price !

TAX CONSUMPTION OF MEAT

Taxes reduce meat consumption:

- Implied reductions in all external costs
- Reduced Medicare and Medicaid spending because of reduced healthcare issues

Taxes raise revenue for:

- Massive public education campaign
- FFAC on steroids!

Reducing our Environmental Footprint!

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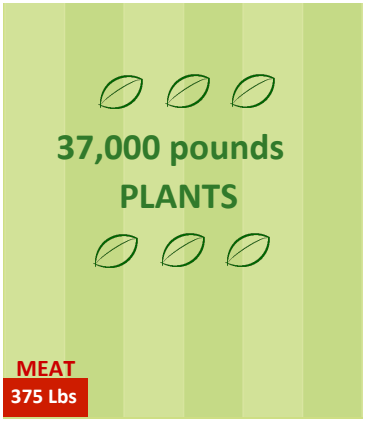
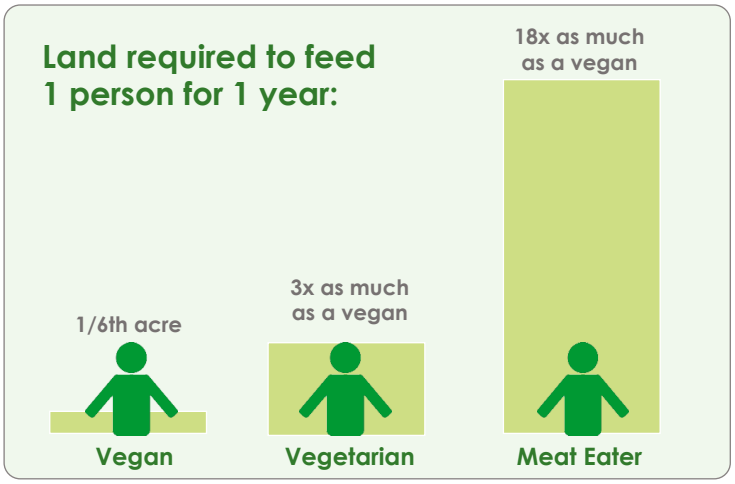


Land used in production
(1.5 acres)



The Economics of Meat Consumption

Carbon Footprint by Diet Type

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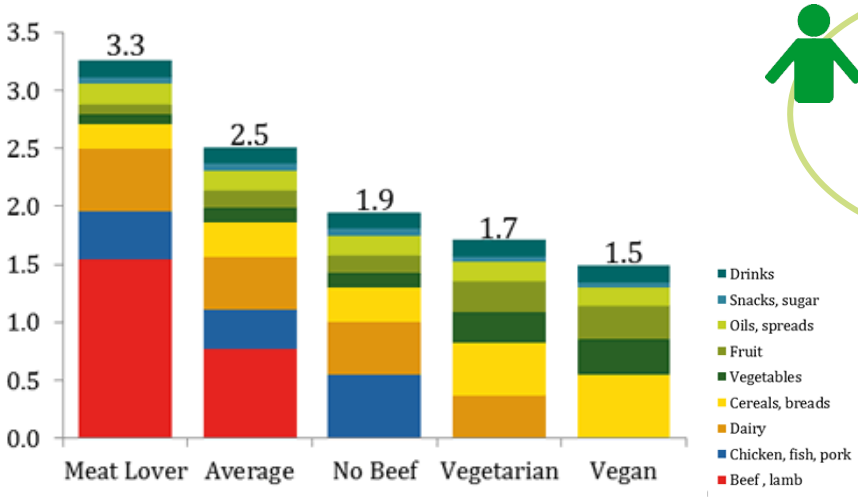

Did you Know..
Compared to a Meat Diet, a Vegan will use:

- 1/11th of the oil
- 1/18th of the land
- 50% less Co2
- 1/13th of the water

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

The Economics of Meat Consumption

Reducing our Environmental Footprint!

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Policy Proposal (Meatonomics)

26

- Cut subsidies directly related to the production of meat and animal products ($18.2 billion)
- Tax meat consumption 50% at the point of sale

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Effects on Externalized Costs (Billions)

	Before	After	Change
Health care	$314.0	$175.5	$138.5
Subsidies	$38.4	$20.2	$18.2
Environment	$37.2	$20.8	$16.4
Cruelty	$20.7	$11.6	$9.1
Fishing	$4.5	$2.6	$1.9
Total	$414.8	$230.7	$184.1

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Conclusion

Meat consumption comes with a variety of costs in addition to the price paid

A diet w/o meat/animal products has a much smaller footprint

How are your diet choices impacting the world?

Marin Economic Consulting

Local Economic Development
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Regional Analysis
Business & Market Analysis

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