

# *"A Sustainable Plate"*



*The key to protecting the environment may be right under your nose.*

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In the interdependent web of life, what we eat affects everything, especially our environment. You can help protect the planet three times a day, simply by choosing to eat more sustainably.

## Issues with Animal Agriculture



- GHG Emissions
  - U.S. animal agriculture is responsible for 18 percent of human greenhouse gas (GHG) emissions, more than the combined exhaust from all transportation (which is responsible for 14% of all GHG emissions). Worldwide, livestock and their byproducts account for at least 51% of all GHG emissions, these emissions are expected to increase 80% by 2050.
  - Cows produce 150 billion gallons of methane per day, a greenhouse gas 25-100 times as potent as carbon dioxide (CO<sub>2</sub>).

- Water Consumption
  - Animal agriculture water consumption ranges from 34-76 trillion gallons annually, and is responsible for 20%-33% of all the world's fresh water consumption. Growing feed crops for livestock consumes 56% of water in the US.



- Animal agriculture accounts for roughly 55% of all water consumed in the U.S., 11 times the amount consumed by all private homes.
- Waste
  - The U.S. meat industry produces 1.4 billion tons of animal waste annually, rough 130 times more than human waste.
  - A farm with 2500 dairy cows produces the same amount of waste as a city of 411,000 people.
- Deforestation & Land Use
  - The primary causes of rainforest destruction are for livestock and animal feedcrops. Animal agriculture is responsible for up to 91% of Amazon deforestation.
  - A single cow requires 2-5 acres of land. In the U.S., nearly half of all contiguous land is devoted to animal agriculture.
- Ocean Dead Zones
  - Roughly 75% of the world's fisheries are exploited, as 90 million tons of fish are pulled from our oceans each year.
  - For every 1 pound of fish caught, up to 5 pounds of unintended marine species are caught and discarded as by-kill. Consequently, as much as 40% (63 billion pounds) of fish caught globally every year are discarded.



## Global Demand

- The current agricultural system is unsustainable:
  - The human population grows by 228,000 people every day.
  - GHG emissions for agriculture projected to increase 80% by 2050.
- Roughly 50% of all grain worldwide is fed to livestock. The world's cows alone drink 45 billion gallons of water and eat 135 billion pounds of food each day, enough to feed 9 billion people.
- Geographically, 1.5 acres can produce 37,000 pounds of plant-based food, or 375 pounds of meat.



## Taking Action

- You can promote sustainability by tracking the environmental impact of what you eat. These tables provide a brief breakdown of the water and CO<sub>2</sub> emissions required to produce common food items.

Food	kg CO <sub>2</sub> Per lbs Food	Car Miles Equivalent
Lamb	17.78	91
Beef	12.25	63
Cheese	6.12	31
Pork	5.49	28
Turkey	4.94	25
Chicken	3.13	16
Tuna	2.77	14
Eggs	2.18	11
Potatoes	1.32	7
Rice	1.22	6
Nuts	1.04	5
Beans/tofu	0.91	4.5
Vegetables	0.91	4.5
Milk	0.86	4
Fruit	0.50	2.5
Lentils	0.41	2

- For example, eating one pound of beef produces as much CO<sub>2</sub> as driving your car 63 miles.
- The average American consumes 209 pounds of meat per year.
- A person who eats a vegan diet for a single day saves 1,100 gallons of water, 45 pounds of grain, 30 sq ft of forested land, and 20 lbs CO<sub>2</sub> equivalent.
- A single meat eater requires roughly 3 acres of land for food per year. A vegetarian requires roughly 1/2 of an acre, and a vegan requires 1/6 of an acre.
- A vegan diet produces the equivalent of 50% less carbon dioxide, uses 1/11 oil, 1/13 water, and 1/18 land compared to a meat-eating diet.

### More Information

For more information on eating sustainably, supporting local produce, and finding vegetarian recipes, visit the following sites:

- Sustainable Table, by Grace Communications Foundation: <http://www.sustainabletable.org/>
- The Vegetarian Resource Group: [www.vrg.org](http://www.vrg.org)
- North American Vegetarian Society: <http://www.navs-online.org/>
- DineKind of Harford County: <http://www.dinekindharford.com/>

Food	Water Cost
1 lb of Beef	2500 gallons
1 lb of Chicken	287 gallons
1 egg	36 gallons
1 lb of Cheese	600 gallons
1 lbs of Pork	575 gallons
1 glass of Milk	53 gallons
1 lb of Butter	2044 gallons

### Sources Cited

- Cowspiracy: <http://www.cowspiracy.com/facts/>
- The United Nations Food and Agriculture Organization (FAO) Agriculture Department: [www.fao.org](http://www.fao.org)
- Water Footprint Network: <http://waterfootprint.org/en/>
- EatDrinkBetter: <http://eatdrinkbetter.com/>
- The Environmental Working Group Meat Eater's Guide: <http://www.ewg.org/meateatersguide/>
- GreenEatz: <http://www.greeneatz.com/foods-carbon-footprint.html>
- Center for Biological Diversity: <http://www.biologicaldiversity.org/>
- Worldwatch Institute: <http://www.worldwatch.org/>