



## CENTER FOR EARTH LEADERSHIP FACT SHEETS

# Eating Less Meat

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*If you ask experts, "What are the most important things I can do to help protect the environment?" eating less meat will surely be among the top five responses. Why is that so? Haven't humans eaten meat throughout our history? Yes, but never have so many people eaten so much meat, and never before has livestock production been so intensive.*

*In previous centuries farmers typically raised a few livestock along with their crops. Or nomads herded animals over vast ranges. In modern times virtually all pigs and poultry in industrial nations are raised in gigantic indoor feeding facilities. Cattle are grazed, often too densely, on grasslands and then brought into feedlots where they are fattened with grains. The impacts of these factory-style practices are showing up all over the globe.*

### **WATER POLLUTION**

When thousands of animals are confined to one area, enormous amounts of waste accumulate. The manure produced in the US is more than ten times the tonnage of municipal solid waste. Manure is high in nitrogen, some of which enters the ground water, where it contaminates drinking water, or surface water, where it harms fish. The excess nitrogen in rivers or bays causes rapid growth of algae. The algae use up available oxygen. Without oxygen, dead zones are created, devoid of fish. EPA reports that animal waste pollutes American waterways more than all other industrial sources combined.

### **LOSS OF FORESTS AND GRASSLANDS**

In Central and South America, one of the largest sources of rainforest deforestation is cattle ranching to feed the export market—often for U.S. beef burgers. Here in the U.S., overgrazing of dry grasslands causes native perennial grasses to be replaced by annual weeds and tough shrubs. The new vegetation doesn't anchor the soil as well. Cattle trample down bare ground, and rainwater carries off the topsoil. As a result the earth's dry rangeland is losing its ability to support plants and animals. According to water-resources consultant Jim Myron, livestock grazing has been responsible for the loss of more native plants and animals than any other human activity in the Western United States.

It takes more than grassland to support the livestock industry. It also takes cropland. More than 70 percent of the grain produced in the US is fed to livestock. In terms of feeding people, this is not a very efficient use of land. John Robbins, in doing research for *Diet for a New America*, found that 16 pounds of grain are used to produce one pound of feedlot beef. It takes more than six times as much land to feed a person on a meat-based diet as it does to feed a vegetarian.



### **ENERGY AND CLIMATE CHANGE**

Just as more land is required for a meat-centered diet, so are more fossil fuels. To produce one calorie of protein from soy takes two calories of fossil fuel. For beef, it takes 54 calories. This energy intensity also affects global warming. Globally, livestock are

now responsible for 18 percent of greenhouse gas emissions. This includes carbon dioxide from raising the feed crops and clearing forests, methane from the cows and manure, and nitrous oxide from fertilizers.

### **WATER AND CHEMICAL USE**

Current cattle raising practices are also water and chemical intensive. The water required to produce one pound of beef is 5214 gallons. This is equivalent to taking a shower every day for one year. Synthetic fertilizers contribute to the excess nitrogen runoff mentioned above. Eighty percent of all herbicides used in the U.S. are sprayed on corn and soybeans, the primary feed crops for animals.

### **WHAT ABOUT FISH?**

In the last 50 years, industrial fleets have fished out 90 percent of the oceans' large fish, such as tuna, halibut, and cod. Huge trawlers literally scrape the bottom of the ocean. Smaller fish are being depleted as well. You might think the solution is farmed fish, but these industrial operations have the same problems as industrial livestock. Crowded pens of fish create too much waste and promote disease that is combated with antibiotics. Farmed salmon also deplete the supply of smaller fish because the latter are used for feed. It takes nearly two and a half pounds of fish feed to raise one pound of salmon.

### **WHAT YOU CAN DO**

If this recounting of environmental degradation sounds discouraging, don't despair. Changes are already occurring. Because eating lower on the food chain coincides with better health, Americans have significantly reduced their consumption of red meat in the last 30 years. At restaurants, start trying some of the vegetarian choices to see what you like. In your own cooking, consider meat a condiment rather than the central part of the meal. Include small amounts of meat in stir-fries, casseroles, and sauces on pasta. Or try a meatless dinner a few times each week, substituting whole grains, dry beans, nuts, seeds, and dairy products. Another option is to seek meat from animals raised locally on small farms. In making these changes, you will help shift the current industrial agricultural system to a more sustainable one.

### **RESOURCES**

- For more information on environmental impacts, check out the executive summary of *The Global Benefits of Eating Less Meat* by Mark Gold, *The Food Revolution* by John Robbins, or *Diet for a Small Planet* by Frances Moore Laapé.
- Try vegetarian recipes in *The New Moosewood Cookbook* by Molly Katzen or *Quick Vegetarian Pleasures* by Jeanne Lemlin.
- To learn more about getting adequate nutrition from plant food, see [www.vrg.org/nutrition](http://www.vrg.org/nutrition).
- To find meat from local pasture-based farms, see [www.eatwild.com](http://www.eatwild.com).