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The 2 Rules for Eating to Fight Climate Change

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What's for dinner?

On a planet wracked by rising seas, expanding deserts, withering biodiversity, and hotter temperatures, that's a fraught question to answer. Food production accounts for [roughly a quarter](#) of the world's greenhouse-gas emissions, and scientists have found that limiting global warming will be impossible without significant changes to [how the world eats](#). At the same time, climate change is threatening the world's food supply, with land and water being [exploited](#) at an "unprecedented" pace.

Reforming the food system to save the planet is going to require new corporate practices, and new laws and regulations at the national and international levels. But individual consumer behaviors matter as well—more than you might think. Your diet is likely one of your biggest sources of climate emissions. But what should you *do*? Eat locally? Get your food from small-scale farmers? Choose organics and fair trade? Avoid processed foods? Eat seasonally?

The choices are many; the stakes are high. But experts on land use, climate change, and sustainable agriculture told me that two habits tower above all others in terms of environmental impact. To help save the planet, quit wasting food and eat less meat.

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The conservation nonprofit Rare [analyzed](#) a sweeping set of climate-change mitigation strategies in 2019. It found that getting households to recycle, switch to LED lighting and hybrid vehicles, and add rooftop solar systems would save less than half the carbon emissions *combined* than would reducing food waste and adopting a plant-based diet.

Let's begin with the role of food waste. Americans waste a lot of food. Nearly [one-third of it](#), in fact. More than 130 billion pounds a year, worth roughly \$160 billion. We throw away enough food to close our own ["meal gap"](#) eight times over. Food is the single biggest component of our country's [landfills](#), and the average American sends more than 200 pounds of food there every year. More than 1,250 calories per person a day, or more than 140 trillion calories a year, get tossed in the garbage.

Households, not restaurants or schools or corporate cafeterias, are the dominant wasters. The problem is worse in the United States than in most other countries, and it has worsened over time. When you toss a spoiled chicken breast or moldy tomato into the trash, you're wasting a

greenhouse-gas-intensive product. You're also sending it to a landfill, where it will emit methane.

Addressing food waste would be low-hanging fruit: The country could save money, emit less carbon into the atmosphere, alleviate the burden on landfills, reduce the number of animals subjected to life on a factory farm, and address its hunger crisis just by eating all the food it makes. Households consuming more of what they buy, and thus buying less, would have a major effect on the whole food system. Food suppliers would produce less to meet the country's more efficient demand. Supermarkets would stock less food. Fewer trucks would need to run from plant to store. Fewer refrigerators would be needed in stores and industrial facilities to keep groceries cold. Fewer cows would fill up feedlots. Fewer acres of corn and soy would be grown to feed them.

How to do it? For one, get wise about expiration labels and quit throwing out perfectly good food. Research shows that [nearly all Americans](#) misinterpret date labels and toss their groceries out prematurely, for fear of food poisoning, and understandably so. Retailers and production companies use 50 different Use By-type labels, and none is federally regulated, except for those on infant formula. Sell By stamps tend to be for inventory management, and have nothing to do with food safety; Best If Used By and Use By stamps tend to be about freshness and food quality, not whether you are about to enjoy a serving of mycotoxins. As a general point, most food is safe to eat as long as there is no evident spoilage, such as visible mold or an off smell. "Use your senses," says Yvette Cabrera of the Natural Resources Defense Council, the conservation nonprofit, noting that those senses were refined through millennia of natural selection in no small part to help us figure out whether food is safe to eat.

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Experts also point to a series of simple, [old-fashioned techniques](#) households can use to ensure that they eat more of the food they buy. They amount to thinking like your Depression-era forebears, pretty much. Figure out appropriate portion sizes; eat your leftovers; store food in appropriate containers and at the right temperature; prepare and freeze perishables instead of letting them linger and go bad; and shop in your refrigerator and cabinet before you hit the store.

And when you're at the store, there is one dietary change to consider that beats all others in terms of its climate impact. It is not eating locally or seasonally. It is not eating organic or fair-trade. It is not eating unprocessed foods or avoiding big-box and fast-food retailers. It is eating less meat. Roughly three-quarters of [the world's farmland](#) is used to pasture livestock or raise crops to feed that livestock. That contributes to deforestation, destroys the planet's natural carbon sinks, erodes the planet's [biodiversity](#), and uses up fresh water.

The main, [mooning offender is beef](#). Cattle are responsible for roughly two-thirds of the livestock sector's [greenhouse-gas emissions](#), while beef and dairy products are responsible for about one-tenth of global emissions overall. Gram for gram, [beef produces](#) roughly eight times more greenhouse-gas emissions than farmed fish or poultry, 12 times more than eggs, 25 times more than tofu, and even more compared with pulses, nuts, root vegetables, bananas, potatoes, bread, or maize.

Beef is so bad for two reasons, Michael Clark, a scholar of [food systems](#) and health at the University of Oxford, explained to me. The first is that it takes a lot of inputs to produce beef as an output: about 20 kilograms of corn and soy protein to produce one kilogram of beef, he said. The second is that cows produce methane as they digest their food. “Other types of animals don’t do that,” he said. “And methane is a more potent greenhouse gas than carbon dioxide.”

Trading your rib eyes and cheesesteaks for lentils and tofu is one of the best things you can do as a consumer for the environment; if all Americans did, the country would [be roughly halfway to hitting its Paris Agreement targets](#). Still, the all-or-nothing way the choice is often presented is a mistake. There is enormous acreage between the Atkins diet, or even the meat-heavy diet of the average American, and full-on veganism, which remains a niche lifestyle choice that few follow for long. Better all Americans cut meat consumption by 40 percent than 3 percent of Americans cut it out completely. Experts encourage taking small, meaningful steps to reduce your meat consumption, and trying to find some joy in doing it. Participate in [Meatless Monday](#); try learning to cook dishes from a plant-heavy cuisine you like; offer a vegetarian option at work events; opt for dishes where meat plays a supporting, rather than leading, role.

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After wasting less food and eating less meat, all other changes a person might make are marginal, experts said, among them eating locally, organically, and seasonally. Moreover, the *climate* impact of those food choices is in many cases contradictory. “I work in food, and it’s confusing for me,” Cabrera, of the NRDC, told me. “Is this lettuce better than this lettuce? Consumers are faced with so many choices, and it is really hard to know.”

Humanely raised, local meat, for instance, can produce more emissions than meat coming from a concentrated industrial operation, Clark told me. Cows in [concentrated animal-feeding operations](#) are generally slaughtered at 12 to 18 months of age, while cows raised exclusively on pastures typically live twice as long. “The cow that lives for longer is going to emit more methane over the course of its lifespan,” he said, though he added that there were still compelling reasons to opt for the local beef.

Similarly, growing a given amount of organic produce usually requires more emissions and acres of land than growing the same amount using conventional farming methods. One study [conducted](#) in Sweden, for instance, showed that organic peas and wheat have a bigger climate impact than their conventionally farmed cousins.

That said, when it comes to the emissions related to shipping food around the world, experts argue that—surprisingly—local is not always better. There’s a certain uncanny decadence to eating Peruvian avocados and Chinese grapes in the dead of winter, or opening a bottle of French Beaujolais or a package of Scottish smoked salmon at will. But transporting food around the world tends to make up only a [small share](#) of a given product’s total greenhouse-gas emissions. What you are eating and how it was farmed is far more important than how it got to you, and imported food typically has a low carbon impact.

For all that, experts said there are good reasons to opt for organic, locally produced, seasonal food, even if it might not be as efficient to produce, or might not have the lowest greenhouse-gas emissions. Many smaller-scale operations outside Big Ag produce food without pesticides, without monoculture, with manure instead of chemical fertilizers, and with respect for biodiversity and soil health. Those are all important facets of environmental preservation too.

Complicating things, what's good for the environment isn't always what's good for animal welfare. When it comes to eating animals, "unfortunately, the cruelty scale is the flip of the emissions scale," Leah Garcés, the president of Mercy for Animals, a nonprofit that advocates for better conditions for animals raised in industrial environments, told me. A family can easily eat a chicken in a single night, but might struggle to eat a whole cow over the course of a year. Moreover, transportation and processing is much rougher on birds, which have delicate bodies. (Each year, more than 1 million chickens die en route to slaughter, and half a million are not actually dead when they hit the scalding tank.) For these reasons, a chicken breast represents much more suffering than a steak, even though the steak is worse for the planet. But the fact remains: The fewer animals you eat, the fewer die, and the better off the planet is.

Diets that are good for the planet tend to be good for people too. Research by Clark and his colleagues has shown that foods associated with good health generally have low environmental impacts, "indicating that the same dietary transitions that would lower incidences of noncommunicable diseases would also help meet environmental sustainability targets."

Our diets are cooking the planet, and changing them, even in small ways, might help avert catastrophe. A burger for lunch, a bag of wilted greens in the trash—these may not be as obviously destructive to the environment as a private jet or a gas-guzzling car. But they are choices we make daily, and they matter.