

**The real clean food: How to eat well for yourself and the planet** by Bob Holmes  
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*It's possible to have a diet that's both healthy and eco-friendly, but would you really want to eat it? Forget the fads, the answer is more straightforward than you think.*

LOW fat, low salt, wholegrain, heart healthy, vegan, organic, free-range, grass-fed, low carb, no added sugar. All these buzzwords, combined with shape-shifting guidelines, befuddling labels and fad diets wrapped up in pseudoscience, can make buying groceries these days fraught. That's partly why anything that claims to cut a clear path through the confusion has ready appeal: witness the rise of the "clean eating" movement in the past few years. The rigid rules set out by self-appointed blogger gurus have since been shouted down as nonsensical notions of purity rather than coherent nutritional science. But the clean eating evangelists found a following because they promised to simplify, to make decisions about food less overwhelming – and to provide a world view to match.



I may have avoided the nonsense peddled in the blogosphere, but, like many people, I find the current world of food bewildering at times. My goals are simple enough: I want to come home with the ingredients for tasty meals that will make my family healthier, without spending a fortune. And while I'm at it, I'd also like to minimise any harm I might cause to the environment and my fellow humans. That shouldn't be so hard, right?

I decided to take a close look at my food choices to see whether I could find a healthier, more sustainable diet. Could I meet both those goals, or would they pull in opposite directions? Equally important for an enthusiastic foodie like me, would I end up with a diet I would actually enjoy eating? And would the whole business be so complicated that only an obsessive would ever bother?

Although it was far more complicated than I hoped to suss the economic impact of my choices on the places that grow food (see "The quinoa conundrum"), when it came to health and sustainability, what I learned was surprisingly encouraging. "Healthy diets frequently have lower environmental impacts," says Alan Dangour of the London School of Hygiene and Tropical Medicine. Better yet, I can get to my goals without having to give up most of the foods I love.

To start, I wanted to figure out how far I could go in minimising my environmental impact. As it happens, Jennie Macdiarmid, a nutritionist at the University of Aberdeen, UK, has looked at exactly this. She and her colleagues sorted through 82 food groups and crunched the numbers to find the diet that minimised greenhouse gas emissions while meeting UK guidelines for nutrient intake and calories.

A sufficiently motivated eater could reduce their greenhouse emissions by a whopping 90 per cent, she found, by sticking to a diet consisting of just seven foods: pasta, peas, fried onions (probably because they have more calories than raw), brassicas (vegetables like cabbages, turnips and broccoli), sesame seeds, dry wholegrain breakfast cereal (which is fortified with lots of nutrients) and confectionery. Sweets don't have a huge carbon footprint, so, ironically, in Macdiarmid's analysis they are a "good" way to get enough calories once you have met your nutrient needs.

As a man who loves his wild mushroom risotto and is not a fan of dental cavities, I am dismayed, to say the least. Macdiarmid is realistic about that. “Sure, that will have low emissions and meet your dietary requirements, but who’s ever going to eat it?” she says. Phew. Fortunately, she also found that you don’t have to go to such extremes to significantly cut carbon emissions.



So I decided to give my current diet a closer look. That means dealing with the elephant in the room: meat. Like most Westerners, I eat more of it than I should, from silky prosciutto to braised lamb shanks to grilled moose steaks (one of the glories of living in Western Canada). The science isn’t fully settled yet, but diets high in saturated fats – which are found plentifully in meat and dairy – have been shown to increase the risk of heart disease. Some of the compounds in red meat, and especially in cured meats, such as bacon

and ham, also increase the risk of colon cancer. The American Institute for Cancer Research recommends eating no more than 500 grams of red meat per week, the equivalent of four hamburgers.

Meat’s environmental cost may be even greater than its health risks. Today, calorie for calorie, beef causes roughly 50 times the greenhouse gas emissions of beans or grains, and requires several times more water. And that’s only getting worse as the demand for a Western, meat-heavy diet grows throughout the developing world.

**“To feed ourselves more efficiently, meat can be part of the solution”**

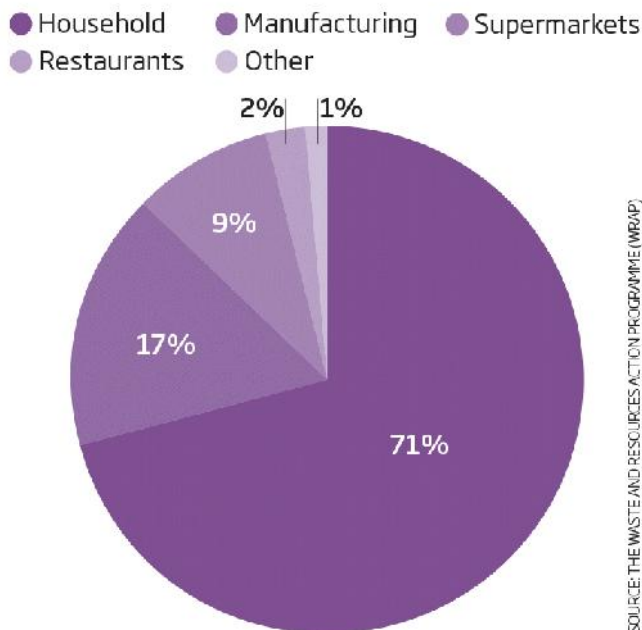
Faced with that reality, it seems my best choice would be to become vegetarian or vegan. With a little care, such diets can provide all the nutrients you need. This would reduce my environmental footprint, and with none of meat’s health risks, I could end up healthier too. But not necessarily – if I were to do what many vegetarians do and switch to a cheese-heavy diet, some studies suggest all the extra saturated fat could leave me worse off.

It turns out that vegetarianism may not be the best option. After all, meat is a great protein source and full of iron and vitamin B12 – nutrients that are often in short supply, especially for the world’s poor. Plus, more than a quarter of Earth’s surface – and 70 per cent of its agricultural land – is grazing land, most of it too steep, rocky or arid to grow crops. Grass-fed cattle or sheep are the best way for humans to get calories from this land.

Chickens and pigs can’t eat grass, but they are still relatively low impact, because they more efficiently convert feed to flesh and produce no methane. They could also live happily on

Going to waste

A third of all food is thrown out globally, with households the main culprit. In the UK, for example, households account for nearly three-quarters of all wasted food



SOURCE: THE WASTE AND RESOURCES ACTION PROGRAMME (WRAP)

kitchen scraps and other food waste, though in much smaller numbers than with modern, intensive production. In a future where feeding ourselves efficiently is paramount, a little bit of meat and dairy can be an important part of the solution. But – and it’s a big but – we still need to eat far less of it.



Ideally, I would buy only meat raised on “leftovers”, but there’s no straightforward way to do that today for chicken or pork, unless I know the farmer. For beef, I should opt for the pricey grass-fed option, which shouldn’t break my budget since I’d only indulge occasionally.

I could also make a point of eating more fish, which can provide healthy omega-3 fatty acids as well as protein. In general, this also has a smaller carbon footprint than red meat. The catch is that some species, such as bluefin tuna, orange roughy

and Atlantic halibut, are overfished; others, such as farmed shrimp and Atlantic salmon, cause immense damage to nearshore habitats and wild fish. To complicate matters even further, some species such as Pacific salmon are overfished in some places and not others. To make sense of it all, unfortunately there’s really no choice but to do a little research before you buy. For me, that means favouring wild Alaskan salmon and Arctic char farmed in landlocked tanks.

But what of the rest of my dinner plate, the starches and vegetables? Should I be making changes there, too? Unfortunately some of the best foods for my health, such as avocados and tree nuts – excellent sources of healthy fats – are among the worst crops environmentally, often grown with irrigation in arid climates. When it comes to growing food, the bottom line is that the environmental impact depends on how and where, which seems worryingly difficult to keep track of. We often think of rice as a water-hungry crop compared with wheat, for example, but in India, most rice is grown with rainwater and most wheat irrigated.

### **“The idea that local produce is best is actually a misconception”**

So is it fish all over again? Do I have to investigate each item I want to eat? Fortunately, no. “Scientists will always argue the toss on whether a Brussels sprout is better than an asparagus,” says Macdiarmid. “But how deep do you want to get? My feeling is we have to have some relatively simple messages.” She and the other researchers I spoke to say it boils down to this: eat a wide range of fruits, vegetables, whole grains and legumes. That way I’ll be more likely to cover my nutrient requirements, and I’d hedge my bets on environmental impact by not eating too much of any one food. So guacamole can stay on the menu, now and then.

Of course, I should be getting all of this stuff as locally as possible, right? I love a stroll around the farmers’ market, but the idea that buying local produce is paramount for environmental sustainability is actually a misconception, says Sue Dibb, executive director of Eating Better, an advocacy group in the UK. Growing tomatoes in UK hothouses uses four times the energy of growing them in Spain and shipping them to the UK, for instance. “If you care about sustainability, you care how hard it is to produce something, more than where it is produced,” says Daniel Mason-D’Croze, a development economist with the International Food Policy Research Institute in Washington DC.



In terms of keeping it local, what that really means is that you can have more of certain foods when they are in season nearby. Out of season, you should cut back on foods that are so perishable that they must be transported by plane, such as the Peruvian asparagus I can buy in the Canadian winter. It's not always easy to know which vegetables are flown and which come by road, rail, or ship, but as a general rule, the quicker it will spoil in your fridge, the more likely it is to have arrived by air.

Most of my dinners, to my great enjoyment, also include a glass of wine or beer. There's research to suggest that alcoholic drinks, in moderation of course, may have some health benefits. But do I really need it? "Arguably, these are all unnecessary foods," says Garnett. She has calculated that alcoholic beverages contribute about 3 per cent of the UK's food-related greenhouse gas emissions.

But she and other researchers acknowledge that, like eating meat, alcohol is deeply embedded in culture, and that trampling cultural preferences in the name of saving the planet could be counterproductive. So making the environment more of a priority (see "The fight for sustainability") might mean the goal is moderation, rather than abstinence. I'll raise a glass to that.

So far, this whole process really hasn't been that painful. Simply eating more vegetables and having smaller portions of meat and dairy can have a big environmental pay-off. Someone eating a standard, meat-heavy UK diet, for example, would reduce their greenhouse gas emissions by 17 per cent just by consuming fewer animal products and more fruit and vegetables, in keeping with healthy diet recommendations from the World Health Organization. Push just a little harder, and they could achieve a 40 per cent reduction. Macdiarmid, too, found that such simple steps could cut emissions by more than a third.



But the truth is, the two most important steps I could take toward a healthy, sustainable diet require even less drastic measures: eat less and waste less. UN statistics show that the average North American or European has access to more than 3100 calories per day, far more than the 2500 that the UK's National Health Service recommends for the average man. (For women, the recommendation is roughly 2000 calories per day.) That's why my waist – like that of most people in wealthy countries – has thickened a bit over the years.

## **“The surprising truth is, it's easy to make a difference – without becoming a fanatic”**

And a quarter of all the food purchased in the UK gets thrown out uneaten, according to the Waste and Resources Action Programme (see pie chart). In the US, it's one-fifth. About two-thirds of that waste is avoidable, thrown out mostly because it has spoiled (like the leftover rice and half-loaf of mouldy bread I just binned), or because people have cooked or served too much. So if I want to trim my own food waste, I merely need to pay closer attention to how much I buy and how much I cook at each meal.

If I'm honest, I began this project braced for disappointment. Diving into the morass of messages about food, sustainability and health, I worried I would come away more confused than I started, or faced with a diet I just wouldn't want to eat. But the surprising – and reassuring – truth is that it's easy to make a difference, even without becoming a fanatic about it. I don't have to turn vegetarian or vegan, because I can reduce my environmental footprint almost as much just by cutting back on meat and other animal products. And I can bring a little more awareness to where my food comes from and how it got to my plate. That's a pretty good recipe for a healthier planet – and a healthier m

## **Go organic**

Choosing organic food may seem an obvious step toward a healthier, more environmentally friendly diet. But there's little evidence that it's any more nutritious than conventionally grown food, and pesticide residues generally aren't a health issue when limits are enforced.

Environmental benefits are similarly elusive. Organic farms do have better soils and more native species, and may also have lower emissions per hectare because they eschew energy-intensive synthetic fertilisers. The problem is that organic crops have lower yields, so need extra land. In the UK, for example, it takes about 29 square metres to produce a tonne of tomatoes conventionally, but almost twice as much to grow it organically. If we all go organic, that would mean less land left over for forests, meadows and other natural habitats.

## **The Quinoa conundrum**

A critical variable in creating a truly sustainable diet is how our food choices impact the livelihoods of the people growing what we eat. Unfortunately, that's very hard to pin down. "There's a lot of huff and puff about these questions, and there's very little data," says Alan Dangour of the London School of Hygiene and Tropical Medicine.

Disruption is inevitable: if we were to eat much less meat, for instance, that's bound to be bad news for cattle ranchers, but might be good news for vegetable farmers. Plus, with less grain going to feed livestock, wheat prices would probably fall – a huge benefit for the world's poor.

Importing food grown in poorer countries enables their farmers to earn extra cash, but by bidding up the price, it may also be taking food out of the mouths of the poorest people there. To eat more plant proteins, for example, I could buy quinoa more often; lots of people are doing that, and its price has shot up in recent years. Some worry that this has priced quinoa out of the reach of poorer people in Bolivia and Peru, and indeed, consumption has fallen there (though this may reflect a shift away from traditional diets to more "modern" fare). "Unintended consequences of good intentions are very common," says Ana Islas Ramos of the UN Food and Agriculture Organization.

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## **The fight for sustainability**

Governments aren't shy about trying to shape people's food choices to improve their health, but they are less practised at nudging people to prioritise the environment as well (see main story). Only Sweden, Germany, Brazil and Qatar consider sustainability in their dietary guidelines, and Brazil falls short of explicitly recommending that people eat less meat. Elsewhere, the food industry has pushed back against any efforts to curb consumption. "I've worked in nutrition for 25 years, and it still amazes me how powerful the food companies are," says nutritionist Jennie Macdiarmid of the University of Aberdeen, UK.

When the US reviewed its dietary guidelines in 2015, for example, the review committee initially proposed telling Americans to eat less meat. Heavy lobbying by meat producers nixed that idea, and the guidelines now advise only that people eat "a variety of protein foods" and limit saturated fat. Similar lobbying in Australia relegated any mention of sustainability to an appendix in its national guidelines.

Local efforts may be more successful. Many school systems have taken the lead in serving healthier and more environmentally friendly foods, for instance. That could help shape the attitudes of younger generations. "One of the things that gives me hope is I see younger people who have changed their behaviour," says Alan Dangour of the London School of Hygiene and Tropical Medicine. "They're eating different things. They're more conscious of their impacts."