

Insects, the next superfood?

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The environmental impact of eating meat is high. Not only are emissions from rearing animals a significant contributor to atmospheric greenhouse gases, but there are large input costs from grain, water and land degradation. Insects are also a protein source but the metrics swing the other way. Many insects can consume human food waste. Zofia Witkowski-Blake asks whether we might get over our reluctance to consuming insects and ponders if crickets could be the new kale.

Transcript

Zofia Witkowski-Blake: What might we be eating in a century's time? According to speculative fiction, nutrient gel and Soylent Green are going to be pretty popular, but I'm sure that most people would agree that isn't the most attractive option, especially here where we are so used to fresh meat and vegetables. In fact, Australia is one of the largest consumers of meat; 90 kilograms per person per year in 2014. And this has many benefits. We have a massive meat and livestock industry worth over \$17 billion that exports worldwide.

But the question is how long this will be sustainable for our population and for the planet. And the answer is not inspiring. Commercial meat, according to a 2006 report from the UN Food and Agriculture Organisation, is one of the most serious environmental problems at every scale from local to global. For every kilo of beef produced, 15,000 litres of water are used, and 300 kilograms of carbon dioxide are sent into the atmosphere.

Eating meat is a greater environmental drain than using a car. So what's the alternative? Vegetarianism seems like a pretty good option. But as the world population increases to upwards of 10 billion, we will need more ways to produce enough protein and other nutrient rich food to feed everyone. Lab-grown and 3-D printed meat is a possibility, but the downside is cost. For the hungry masses, a stem cell steak just might not be accessible enough in price and distribution, at least until the technology is really well developed.

However, there is an alternative; the tiny creepy-crawlies that live all around us. But why would we want to eat bugs? For starters, insects are really good for you. Caterpillars, for example, have high levels of iron and are loaded with vitamins B1 and B2, and outstrip beef for protein. They are basically super foods. Crickets could be the new kale. But the real difference comes in production.

The Food and Agriculture Organisation of the United Nations states on its website that crickets need six times less feed than cattle, four times less than sheep and twice less than pigs and chickens to produce the same amount of protein. Even better, insects such as crickets and mealworms could

potentially be fed on our food waste. And since it takes six kilos of grain to produce one of beef, this would be even more environmentally friendly.

There are already multiple kickstarter campaigns based around the idea of people growing edible mealworms in their very own compost bins. And as it turns out, millions of people across the world already do eat bugs. Japan, Ghana, Mexico and Brazil, all consider insects delicacies. In Thailand, fried insects are served like peanuts with beer. And in China, ant soup keeps you warm in the winter. In Australia, witchetty grubs and honey ants have been eaten by Indigenous peoples for thousands of years.

This aversion to eating insects is pretty much a uniquely Western phenomenon, tied up with all our cultural baggage surrounding how we eat animals. Here in Australia and in other first world countries, the idea of meat is separate from the animal that it comes from. We even use different words for it, such as beef instead of cow. Unless you are part of the meat industry, you probably have no contact at all with the process of living animals becoming steaks, and that division between the source and the end product changes our perception of what meat is.

One example of this is how Chinese restaurants in America shy away from serving anything that is recognisably animal. In her book, *The Fortune Cookie Chronicles*, Jennifer Lee writes that 'mainstream Americans don't like to be reminded that the food on their plate once lived, breathed, swum or walked'.

Guests

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