



Eat insects for fun, not to help the environment

Insects are an excellent source of sustainable protein, but people will only be persuaded to eat them if they seem appealing, says Ophelia Deroy.

As the world searches for a more sustainable future for its growing population, there is increasing interest in getting more people to eat insects. Earlier this month, former United Nations secretary-general Kofi Annan told *The Guardian* newspaper that “eating insects is good for the environment and balanced diets”. This backed the view of a widely cited 2010 report from the UN Food and Agriculture Organization that stressed insects’ “exceptional nutritional benefits” and “fewer negative environmental impacts” when compared with “many mainstream foods” (see go.nature.com/6ln9dw).

So far, there is little sign that these messages are being heeded. Turning Westerners into insectivores has joined the long list of challenges that require behaviour change. As such, it holds broader lessons for other attempts to convert people to more sustainable lifestyles, and is a useful case study.

Many people already eat insects. There is evidence that insects have been a continuous part of our diet since the early hominins, and they are still eaten widely in south and east Asia, Africa, and South and Central America. (Although the practice is declining in some places as people switch to ‘aspirational’ Western lifestyles.)

Western policy-makers and the media often send messages that lean heavily on this argument: they do it, so why can’t we? These messages use rational reasons to try to overturn the presumed major psychological objection to eating insects — disgust. This strategy assumes that the revulsion people feel when presented with, say, house-fly pupae (protein content 62%), is a cognitive process that can be addressed through education.

There is little evidence that this strategy is working. Worse, appealing to reason and responsibility reinforces a dilemma in the minds of consumers: many know that they can, in principle, eat insects, and perhaps that they should, but very few are willing to do so.

What if it is not disgust that stops people eating insects? Disgust is linked to contamination and fear of disease. Insects are considered disgusting to eat, the theory says, because insects themselves eat ‘dirty’ foods. Yet many Westerners are happy to consume lobster, which scavenge from the sea floor, and pigs, which eat slops. Many insects, including some grasshoppers and ants, have the same diet as sheep.

We should think less about combating disgust and more about appealing to taste. Most of the insects eaten in the world are cooked as part of interesting preparations that make them a genuine competitor to other foods, and often a more attractive option. These insects are eaten by choice, not necessity. This obvious fact is missed by most of the current research and policies.

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Taste is affected by more than the flavour and smell of food. Also important is colour, the other visual images associated with the food and the name it is presented under. The re-naming of the (rather ugly) Patagonian toothfish as Chilean sea bass, for example, led to a sharp increase in sales. In one of the few studies to have been conducted so far, Belgian consumers were shown to accept insects (mealworms and house crickets) more readily when they were prepared using familiar flavours (R. Caparros Megido *J. Sens. Stud.* **29**, 14–20; 2014).

Chefs and others who work intimately with food know the importance of perception. I would never have eaten crickets if it was not for the beautiful golden dust that the chef sprayed them with before placing them on the side of a salad. It made them look unusual, and rare, but also made me anticipate a firm crunchy texture and a sharp taste. These expectations made the experience of eating them much less scary, and really enjoyable. And I do not remember it as ‘doing something good for the environment’ or ‘eating an insect alternative to animal protein’.

If we are serious about broadening the appeal of insects as food — and we should be — then the images we present to consumers should not be of industrially farmed meat substitute.

Telling citizens and consumers that the food industry will have licence to add insect matter to food products will make them worried and sceptical. What is insect matter after all — which insects? How were they grown? Food is a question of trust. Insects that are farmed industrially, or imported from long distances by road, air or

sea, might not be such a great help for the environment. We should focus instead on local insects. Studies suggest that people will be more likely to try a bee ice cream from their local honey producer than a stick of grilled scorpion from far away.

We must stress the importance of cooking and recipes. And we should even move on from using the too-broad term insects. We do not eat mammals and birds; we eat cows, sheep and chickens. Insects could be identified by their real names, such as house crickets and wax-moth larvae. And we should not forget those with a sweet tooth: many insects lend themselves naturally to desserts.

Most importantly, before we try to change the minds of consumers, we must understand their objections. And to overcome these objections, food scientists, chefs and psychologists must work together to make insect dishes appeal as food, not as a way to save the planet. ■

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