

## FOCUS



## Buying into food's impact

Australian consumers are starting to understand the true cost of the food they buy, and that particular choices can significantly reduce environment and health impacts. **Rachel Sullivan** reports.

As part of the expansive international trade in food supplies Australians consume a lot of imported product. iStockphoto/MorganL

As the intersection of water, energy, environment and population demand tightens global food markets, studies are showing that what we eat can have much more environmental impact than driving or powering our homes. But how do we know what food purchase choices to make? Is an organic banana produced in northern NSW and trucked down Australia's east coast a better option nutritionally and environmentally than one produced by conventional means in the Philippines and shipped to an Australian market? The answer is not as clear-cut as you might think.

In only a couple of generations, people have gone from being largely self-sufficient, growing and consuming seasonal produce from their own gardens, to relying on produce purchased from highly selective retail outlets that import foodstuffs from all over the world.

The recent drought highlighted to the

public what scientists and farmers have known for a long time – while demand continues to increase, long-term water shortages, climate change, population expansion onto arable land and other changing land use patterns have substantially reduced the amount of land available for food production in Australia. Meanwhile input costs, such as fuel, have risen significantly, making fresh food more expensive, while processed convenience foods of little nutritional value but wide market appeal are filling supermarket shelves – and shoppers' trolleys to the detriment of both their health and the environment.

### Food costs rise

The problems are not restricted to Australia; food prices are skyrocketing worldwide and land that was once used to grow crops is being turned over to housing, or used for biofuel production.

The issue was highlighted during the recent global rice shortage where drought reduced Australia's rice harvest by 98 per cent, causing greater reliance on imports. Meanwhile other similarly affected rice producing nations including India, Vietnam and Brazil imposed export curbs to ensure they had enough of the staple to feed their own people.

Many scientists believe the rice failure is a sign that the warming planet is starting to affect food production. But research is showing that agriculture is not just affected by climate change, it is a major contributor to the problem.

Scientists have begun assessing foodstuffs for their carbon consumption and environmental impacts across their whole life cycle, from paddock to plate. Every input is measured, from the water taken to raise an animal or crop (known as embodied water), to gases generated tilling

the soil, sowing and harvesting crops, making fertilisers and pesticides, harvesting and transporting the food to be cleaned, packed or otherwise processed, and then transported again to the store and home for use.

For conventional animal production, those costs are just the start, with additional emissions caused by heating/lighting sheds, transporting animals for slaughter, processing, packaging and so on. The costs vary depending on how and where the animal or crop was raised – significantly, for Australia, a recent report by the Victorian Water Trust into the state’s ‘virtual water cycle found that dairy product and red meat consumption account for more than a quarter of Victoria’s total water use.

Dr Bruce Lee, Director of CSIRO’s Food Futures Flagship, says it is not only food miles (fuel consumed in the production, transport and processing of food) that are a problem: the use of nitrogen-based fertilisers to boost productivity on depleted soils is one of the biggest sources of greenhouse gas in agriculture.

To underscore their impact, a recent German study commissioned by Food Watch that converted emissions from food production into car trip equivalents found that organic production methods equated to fewer miles for almost every type of production covered, primarily because ‘organic systems do not use fossil fuel based chemicals that emit nitrous oxides and damage microbial soil life’, according to Dr Andrew Monk, Chair of Biological Farmers of Australia Standards.



**Environmental thinking behind food choices sends an important message to the market.**  
iStockphoto/MorganL

### Back to the backyard?

As people become conscious of the effects of their consumption, there is a movement for a return to backyard vegetable production and poultry keeping in the suburbs. Where populations are denser, city farms and community and rooftop gardens have started springing up, and ‘locavores’ (people who only buy food produced within a certain distance of their home) are attracting interest from the media and their local community.

While admirable, few scientists believe this will provide enough food for the growing population. Dr Lee thinks that both in Australia and overseas, genetically modified (GM) crops may hold the answer to sustainable production, but argues it is up to consumers to recognise their value.

‘Even though the first GM crops were drought and pest resistant and therefore beneficial to farmers and the environment, they had limited success with consumers in the market, mostly because people simply couldn’t understand what was in it for them,’ he comments. ‘Yet by making a single gene change, we can potentially increase yield by 20 per cent, or halve the amount of nitrogen needed to produce a crop.’ He believes one key to acceptance of GM crops is to demonstrate their manifold benefits to consumers.

Dr Denis Blight, Executive Director of the Crawford Food Fund, agrees. ‘The issue [for consumers] is the environmental benefits GM might have in terms of drought tolerant crops, utilisation of marginal lands, non-energy based weed management, lower needs for fertiliser and pesticide (and hence lower GHGs),’ he says. ‘If consumers had a clear understanding of these questions and independent scientific advice on them, they could have a powerful impact indeed through the choices they make in the supermarket.’

‘Better understanding of labels (and pushing for better labelling) will help consumers make informed choices about both GM foods and a product’s environmental footprint, while shopping in food outlets with good environmental credentials will have beneficial effects throughout the supply chain.’

So, simple common sense choices can make an immediate difference to your food’s environmental budget, significantly lowering your carbon count. Read up on these choices and you’ll do even better – the *Ethical Consumer Guide* is a good starting point.

### The supermarket standard

Australian supermarkets freely admit they are a long way behind the sustainability standard of leading organisations such as UK-based Tesco. The UK has the most highly developed fresh food market in the world, with sophisticated, innovative retailers competing aggressively for consumer dollars. About 50 per cent of UK supermarket shoppers are seriously interested in the sustainability criteria of the food they buy, with many unconcerned about price.



**The UK’s supermarket goods distribution network is among the most sophisticated in the world.**  
iStockphoto/Christian Lagereek

Supermarket giant Tesco saw that not only could they cater to this highly discerning market by ramping up their own sustainability credentials, reducing water and power consumption, they also recognised that becoming greener was a real growth pathway.

Tesco CEO Sir Terry Leahy said in a 2007 speech that ‘the huge growth in sales of organic food is testimony to the fact that people will make greener choices if given the right information, opportunity and incentive.’

‘The competitive pricing of organic products means that, for many, they are no longer luxury items,’ he continued.

By transforming its business model so that the reduction of its carbon footprint became a central business driver, Tesco has achieved a 39 per cent year-on-year growth in sales.

**More information:**  
*Ethical Consumer Guide*, [www.ethical.org.au](http://www.ethical.org.au)  
About the UK food industry,  
[www.ausfoodnews.com.au/2008/10/20/uk-food-industry-on-the-road-to-sustainability.html](http://www.ausfoodnews.com.au/2008/10/20/uk-food-industry-on-the-road-to-sustainability.html)