Reducing your meat intake by one meal a week saves 300kg of greenhouse pollution a year and up to 10,000 litres of water. - Australian Conservation Foundation.

in Britain in the 1980s. Dioxins from industrial discharges into oceans worldwide is an example of the effects environmental pollution can have on the food chain. Dioxins can be absorbed by fish and can be poisonous to humans if large enough doses are consumed.

Scientists often discover links between the use of some additives and cancer.

Aspartame, which was found in some sugar substitutes and diet drinks, was one such additive.

Another was acrylamide, found in such potato products as chips and french fries.

Food Standards Australia New Zealand administers the Australian Food Standards Code and undertakes scientific risk assessments on food, food additives and food contaminants, both imported and grown domestically.

It evaluates any risk to human health then develops appropriate strategies to manage the risk it poses.

Figures show Australia has a strong track record of avoiding contaminated food.

Only 2 per cent of all food imported fails the Australian standards. Of that, 99 per cent only fail labelling requirements.

Very few products exceed Australia's limits for chemical, bacteriological and other contamination.

Food standards has strong networks with the regulating bodies of other countries, which can identify outbreaks in their own backyard and help prevent those goods from entering Australia.

It also monitors issues which arise overseas and forms new strategies to ensure Australia is protected.

This includes the global discoveries made by scientists who often determine certain additives or pesticides can cause illness such as cancer.

Food standards investigates each claim to identify the risk and can alter the code according to its findings.

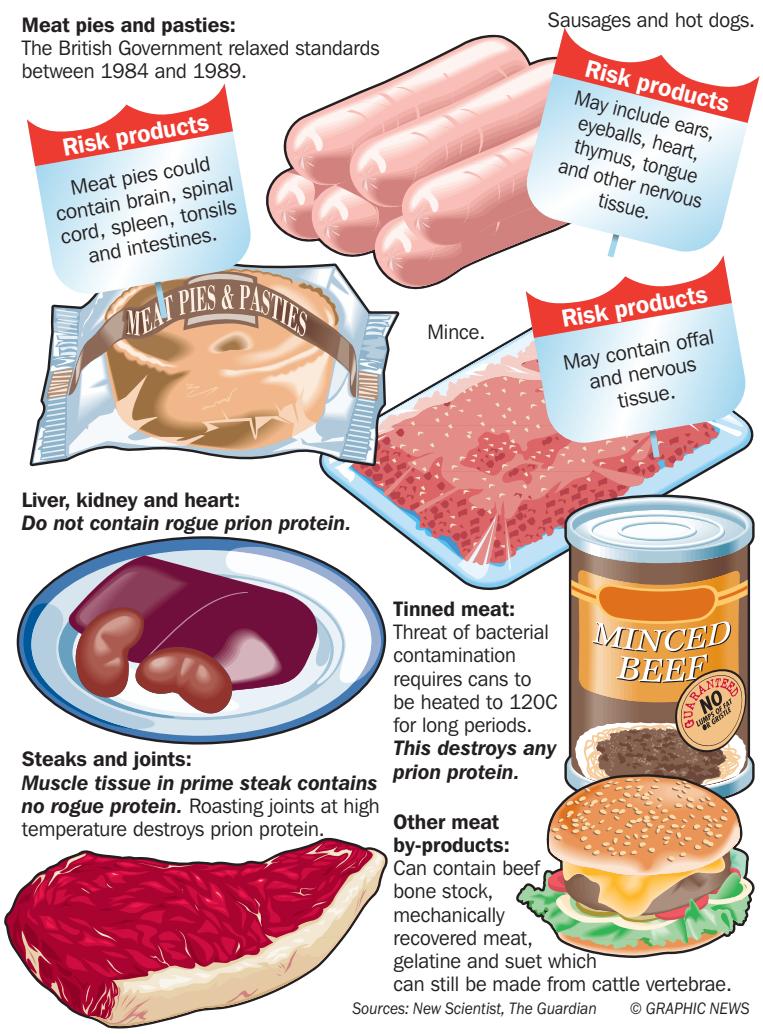
It works with Australian Quarantine and Inspection Service to inspect and test imported food for banned contaminants, regardless of the manufacturer's history of compliance.

If found, the food is re-exported, destroyed, treated or downgraded for non-human consumption, such as stockfeed.

The Federal Government only agrees to an import deal once the product is cleared of contamination.

Britain's BSE crisis

Eating meat is the most likely explanation for many cases of CJD – Creutzfeldt -Jakob disease – the human form of BSE or "mad cow" disease in Britain. Both illnesses are blamed on a rogue version of a harmless, natural, protein molecule known as prion protein. Found in brain and nervous tissue, prion protein can be destroyed by prolonged high temperatures. Regulations have since been introduced world-wide to avoid contamination of meat products with tissues taken from animal's nervous systems.



Sources: New Scientist, The Guardian © GRAPHIC NEWS

Quality control

FARMERS are one of the major groups at risk of suffering from an outbreak of disease or contamination in Australia.

Many of the diseases that exist in other parts of the world do not occur in Australia.

The nation's agriculture sector, which heavily relies on export deals to many countries, must retain its disease-free status in order to protect its reputation of supplying premium and high-quality food.

Seventy per cent of the food Australia produces is exported and is worth $32 billion a year to the economy.

The National Farmers Federation says that, much like Australia, other countries simply do not want to receive diseased produce.

The federation is heavily involved with government departments to outline the priority contaminants and methods to stop them entering Australia, such as the quarantine rules.

Foot-and-mouth disease is one issue which has surfaced overseas in recent times but has not entered Australia.

If an outbreak had occurred it would have taken years to contain, much less eradicate, and would have jeopardised export deals, such as beef to Japan.

Avian influenza (bird flu) is another animal disease which has occurred in the region but so far has not entered Australia.

Authorities are monitoring viruses which attack bees, reported as close as the northern island of New Zealand, to protect crop industries which rely on bees for pollination.

Crop diseases such as fireblight, which affects apples and has been reported in New Zealand, would infect local industries as well as threaten export.

The federation attributes Australia's isolation from other continents as one of the main reasons why many diseases have not surfaced on our shores.

Isolation, however, has the potential to mean an outbreak would be more severe in Australia than in other countries, as there are no natural defences in the ecosystem against many pests.

Keeping an eye on toxins

TOXIC chemicals are increasingly being used in the manufacture and production of fresh food across Asia and governments appear to be struggling to control it.

Formaldehyde is the most widely found chemical used for everything from keeping flies off fresh meat to prolonging freshness during transportation.

Boric and benzoic acid, industrial dyes, fertilisers and pesticides, antibiotics, bad oil and sulphur dioxide also are now being found in foodstuffs.

Some bakeries are using textile and tannery dyes to make sweets look more colourful.

There are also reports of farmers using dangerous pesticides and fertilisers to increase yields while livestock are often being given questionable medicines or antibiotics.

Health experts believe the use of the chemicals is affecting public health by causing such illnesses as cancer, liver and kidney problems, and stunted mental and physical development in children.

Links

Food Standards Australia New Zealand. www.foodstandards.gov.au

Australian Quarantine and Inspection Service. www.aqis.gov.au

Australian Food News www.ausfoodnews.com.au

World Health Organisation www.who.int

Among the offending countries is China, where two companies were this year found to have added a lethal chemical, melamine, to wheat gluten and rice protein.

Melamine was later used in pet food which was believed to have killed thousands of dogs and cats in the U.S.

Chinese Government officials are clamping down on the practice but ignorance of the harmful effects of many substances and the inability of the Government to police the food-product sector have combined to create a major health threat.

Chinese chemicals have already made their way into the foodchain in Vietnam, where authorities have become so alarmed at the prevalence of adulterated food that tainted food has been blamed for one-third of the 150,000 annual cancer cases.

Formaldehyde has also been problematic in Jakarta, Indonesia, where nearly 60 per cent of noodles, salty fish, tofu and meatballs sold in markets contained high levels of the preservative.

Other governments world-wide are banning the importation of some Chinese foods because of the concern of food toxicity.

Increases in fuel prices in late 2005 and 2006 is being partly blamed for much of the phenomenon, as producers were forced to cut back on more expensive ingredients in their foods.