



Australian Government

Australian Institute of
Health and Welfare

Australia's food & nutrition 2012 in brief





Introduction

In 1994, the Australian Institute of Health and Welfare published its first comprehensive report on Australia's food and nutrition.

The much-anticipated revised edition, *Australia's food & nutrition 2012*, provides a timely update of the key components of our food and nutrition system.

This *Australia's food & nutrition 2012: in brief* companion booklet highlights information from the main report relating to food supply, distribution, consumption, nutrition, health outcomes and future challenges.

We hope readers will be inspired to find out more and explore topics in greater depth in *Australia's food & nutrition 2012*.



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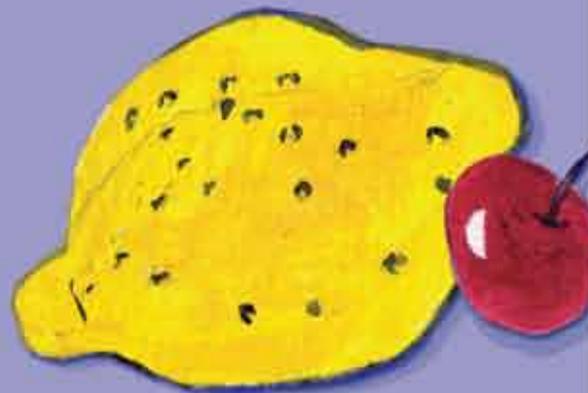
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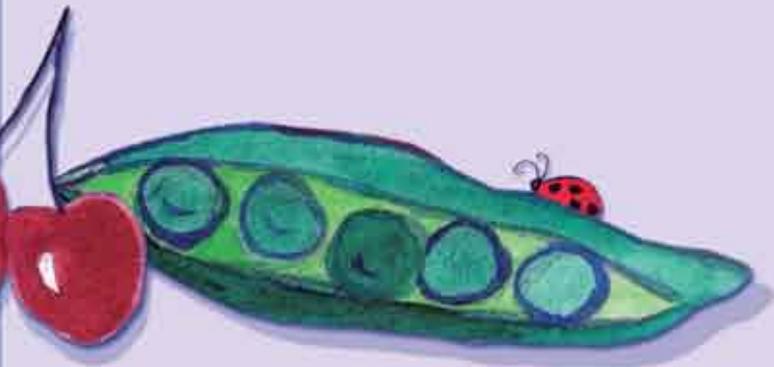
Cover art by Kathryn Harrison





The Story

Our food comes from a variety of sources	4
And is distributed to lots of different places	8
Before it ends up on our plate	11
We should eat more of some foods, less of others	16
Our world and lives are shaped by our food	23
So there are important challenges ahead	27





Our food comes from a variety of sources

Australia's food industry is complex and involves a range of people, places and processes.

It contributes significantly to our economy.

What types of foods do we produce?

Australia produces a wide range of foods, enough to feed 60 million people.

The food industry can be divided into:

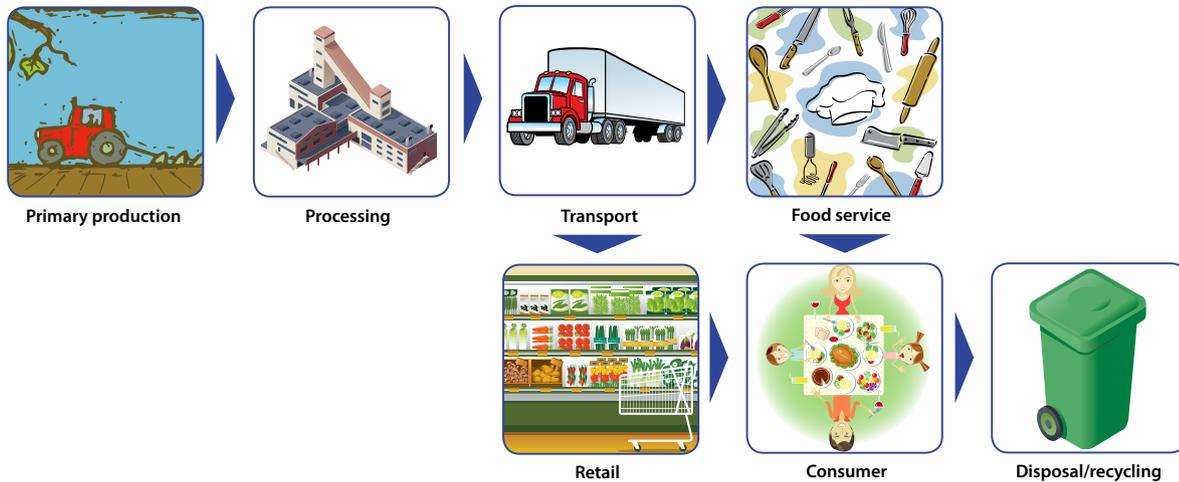
- primary (agriculture and fishing)
- secondary (manufacturing and processing)
- tertiary (retail).

These groups are defined by the changes food undergoes. For example, growing fruit is part of a primary industry, canning it is a secondary industry, and selling canned fruit is a tertiary industry.

The food processing industry is the largest manufacturing industry in Australia. In terms of the value of food production, our largest agricultural industries are:

1. meat
2. grains and oil seeds
3. fruit and vegetables.

The food supply chain





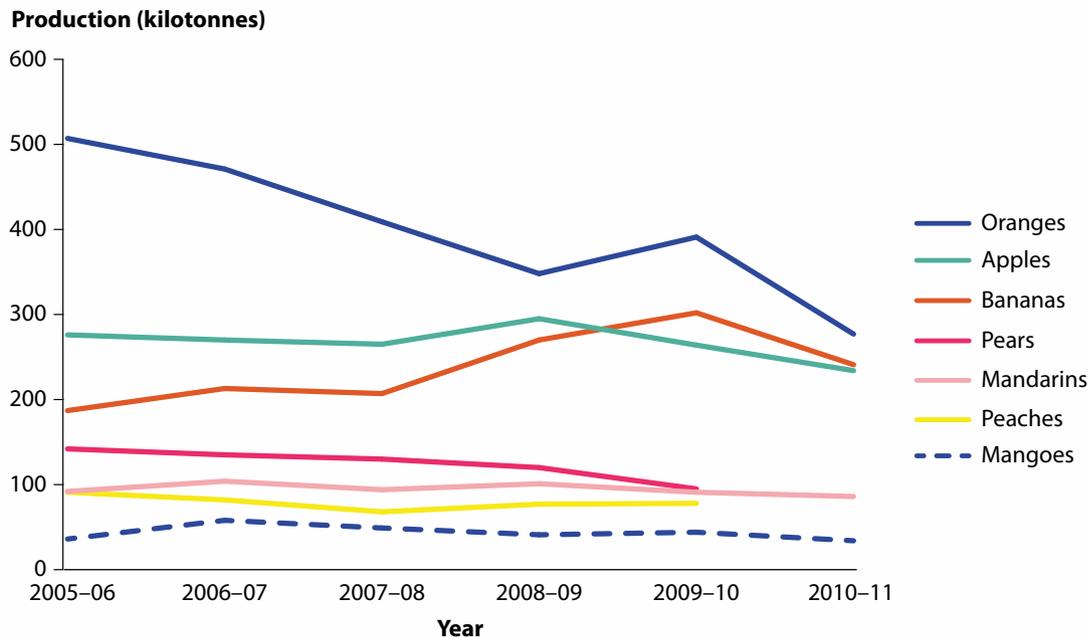
We grow wheat, fruit and vegetables...

In 2010–11, Australia exported 18.6 million tonnes of wheat, 5.3 million tonnes of other grains, and 1.7 million tonnes of pulses (dried peas and beans).

Australia's horticulture industry includes the production of fruits, vegetables and nuts. The main fruit crops are oranges, apples, bananas, pears and mandarins. Potatoes and tomatoes are the main vegetable crops.

Australia also has a large dairy industry. Milk is used mostly for drinking, but also for making cheese, milk powder, butter and other dairy products. In 2009–10, about 45% of our milk was exported.

Production of selected fruit, Australia, 2005–06 to 2010–11





Our food comes from a variety of sources

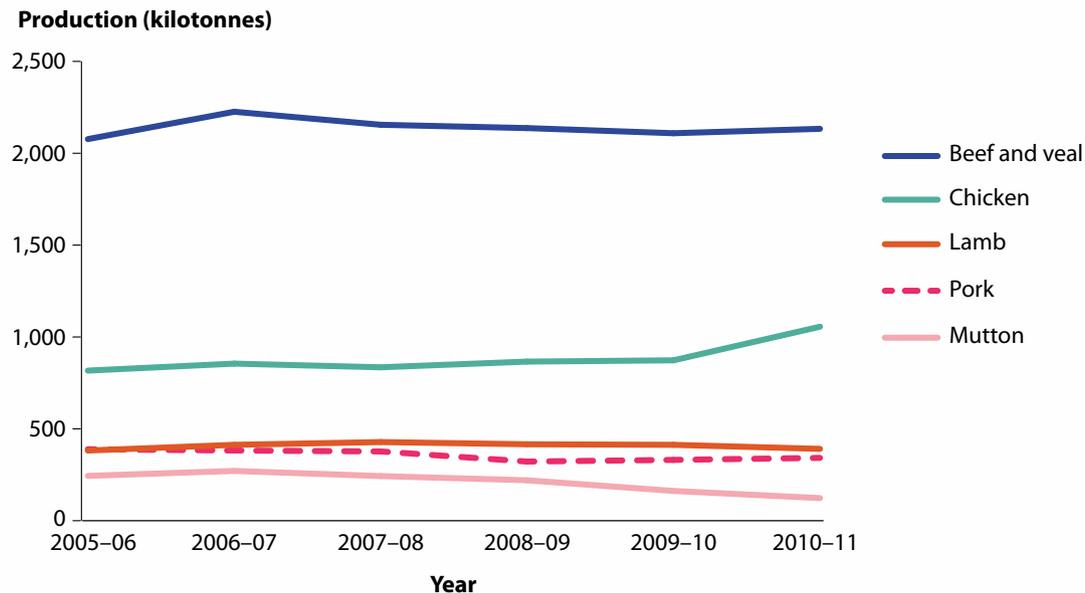
but in Australia, livestock is king

The livestock industry is our most valuable food production industry, and includes cattle, sheep, chicken and pigs. Australia is the second largest exporter of beef in the world and the eighth largest producer. In 2010–11, it made up 34% of farm and fish production, or 44% if including milk.

In 2011, there were about 29 million cattle in Australia, and about 91% of these were used for beef.

Australia's chicken industry is steadily growing. The number of chickens used for chicken meat increased from 433 million to 512 million between 2005 and 2010.

Production of beef and veal, mutton, lamb, pork and chicken, Australia, 2005–06 to 2010–11





And is distributed
to lots of
different places

The food we produce can travel long distances
to get to our plates.



From tractor...

Farm numbers in Australia have been declining in recent times, but the average size of farms has increased by about 23%.

Agricultural production is concentrated on larger farms, with 10% of farms producing more than 50% of output. Farming practices have also changed with the use of more intensive production systems and techniques.

Despite these trends, small farms are more common.

And is distributed to lots of different places

to truck



Of the food we eat, 90% is grown in Australia, and often travels long distances to reach us.

A recent study showed:

- the total distance of road transportation in one hypothetical Melbourne food basket was about 21,000 kilometres (just under the total coastline length of Australia)
- bananas can travel more than 2,500 kilometres by road from northern Australia to reach consumers in Melbourne.

Australia is the 14th largest net exporter of food in the world.

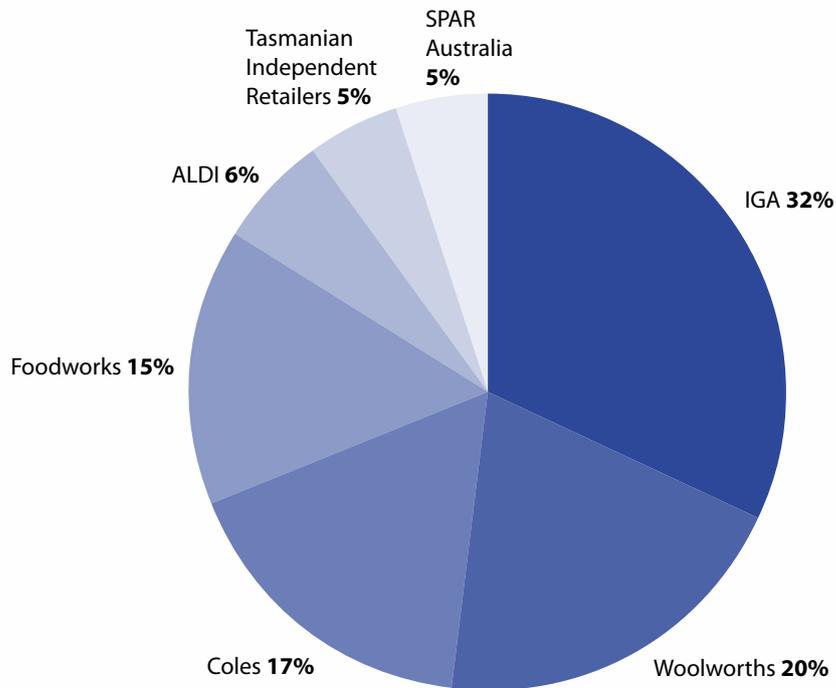


...to trolley

We buy our food at supermarkets, delicatessens, butchers, bakeries, farmers, markets, fruit and vegetable stores and, more recently, online.

However, Australia has one of the most concentrated retail food sectors in the world. The two major supermarket chains own about one-third of all supermarkets in Australia, and more importantly have almost 80% of the packaged grocery market.

Supermarket operators in Australia by store numbers, 2011



Before it ends up on our plate

Food is essential for our health and wellbeing,
so it is important that we understand about the
food we eat.





What sorts of foods do we buy and eat?

We spend...

In 2009–10, Australian households spent an average of \$237 a week on food and beverages.

About \$63 a week was spent on food prepared outside the home (restaurants and takeaways), and \$32 a week on alcoholic drinks. Meat, fish and seafood collectively accounted for \$30 a week on average.

We buy...

Australians buy a wide range of food products. In 2010, more than 55,000 food items were available in supermarkets.

Between 2009 and 2011, the top five food categories sold (excluding fresh fruit and vegetables) were:

1. dairy foods (such as milk, cheese, yoghurt and butter)
2. cold beverages (such as soft drinks, sports drinks, and mineral waters)
3. frozen foods
4. confectionery
5. bakery items (such as bread).

We cook...

Australians generally prepare and eat their food at home. In 2009, most Australians (78%) reported eating a home-cooked meal around 5–6 nights a week. Females were more likely than males to report preparing the evening meal themselves (84% compared with 62%).

Takeaway was the next most popular option for evening meals (9%), followed by eating at a restaurant (8%), and home delivery (5%). Males were more likely than females to report eating out at restaurants, eating takeaway and eating home delivered food.



How do we choose our foods?

The foods we choose are influenced by price, availability, culture, personal preferences and health and nutrition concerns.

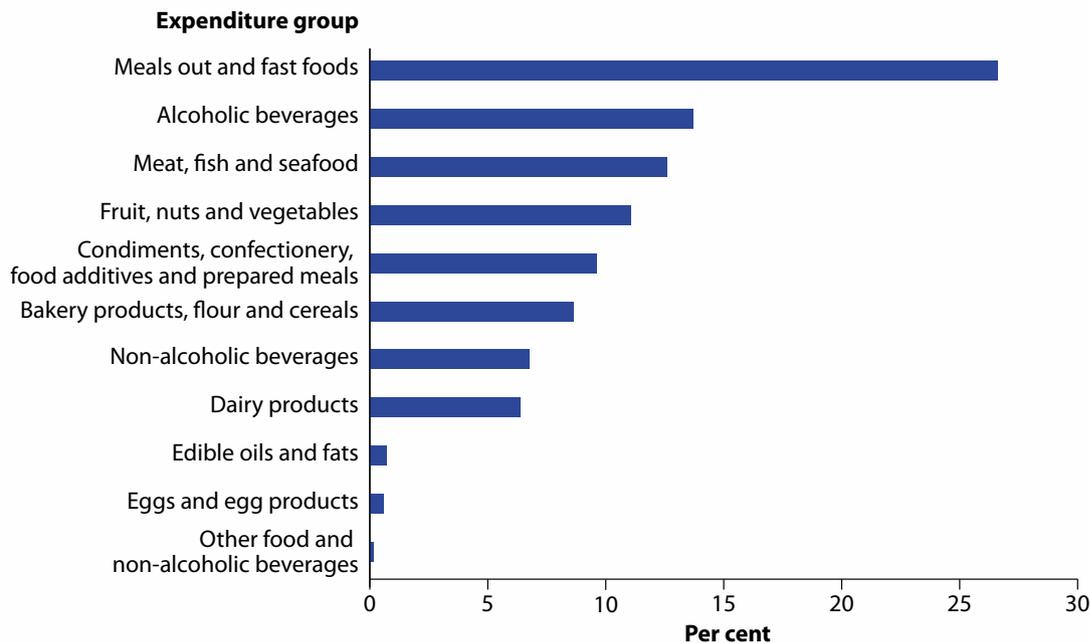
Food is an important part of our social and family lives, and the eating habits and preferences of those around us influence our food choices.

Personal beliefs also influence food choices, such as concerns about the environmental impact of growing particular foods, or the wellbeing of animals.

People may also choose foods based on health concerns, such as high blood pressure, allergies, high cholesterol, or a need to lose weight. In some circumstances, limited access to affordable fresh fruit and vegetables (among other products) may be an important factor influencing dietary choice.

Before it ends up
on our plate

Proportion of total household weekly food expenditure, by selected food items, 2009–10



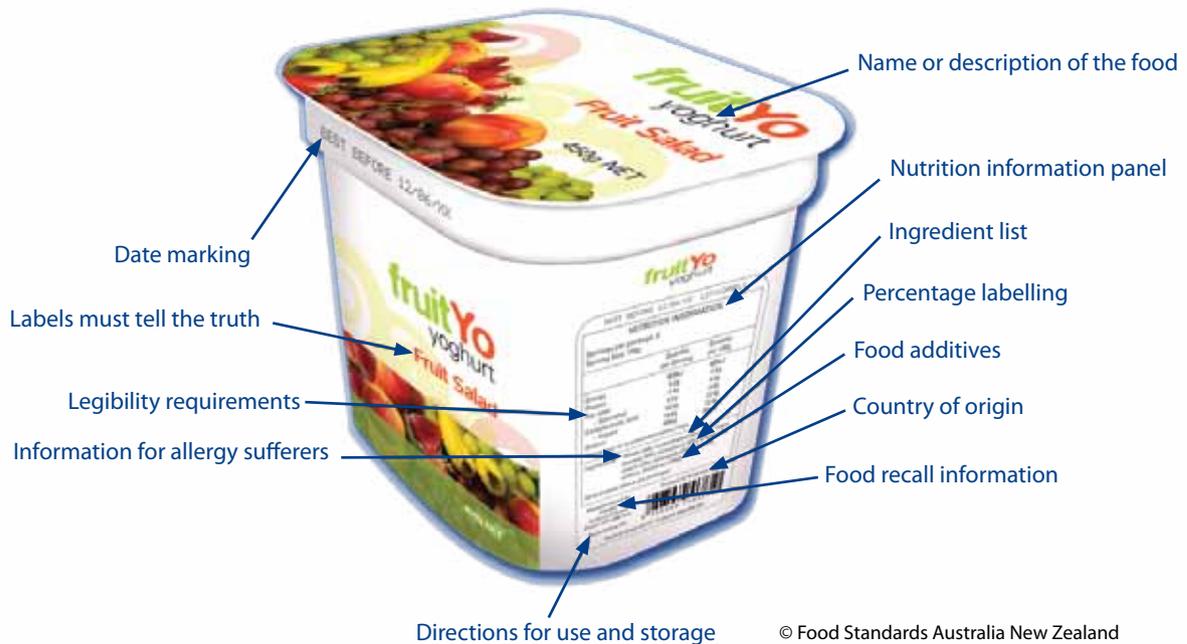


Labels

Food labels present nutritional and other information to help consumers make safe and healthy food choices. Some labelling information is mandatory, while others are voluntarily added by manufacturers. Labelling must include a list of ingredients and food additives, as well as any potential allergens. A nutrition panel outlining levels of key nutrients is also required.

We use food labels:

- for health reasons
- to avoid particular ingredients or food additives
- for personal beliefs, such as avoiding genetically modified foods or foods containing animal products or to buy items grown locally.



© Food Standards Australia New Zealand



Advertising

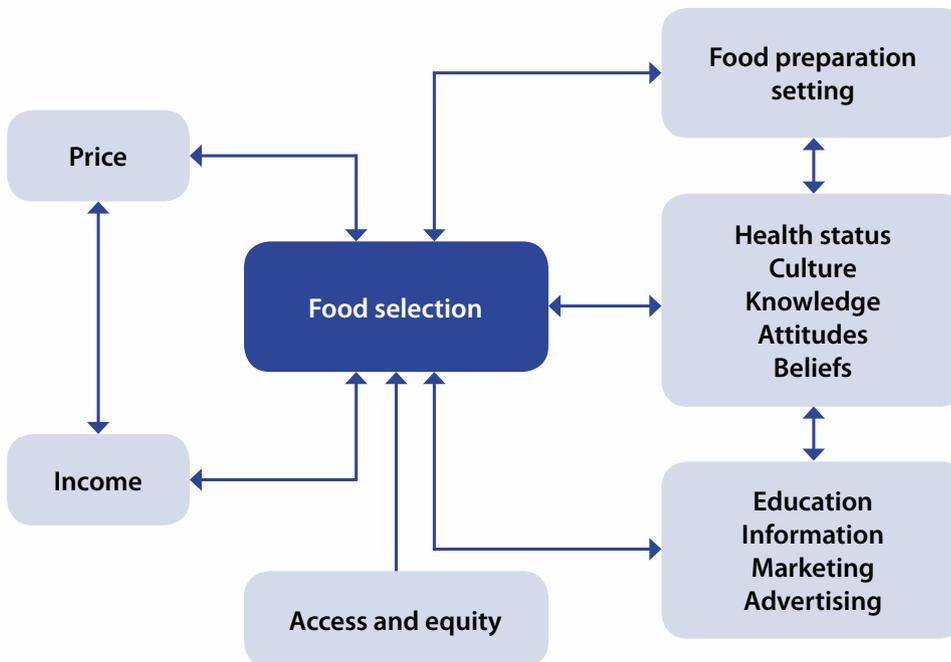
Advertising may also influence people's food choices and behaviours.

Food advertising to children is very common and most is for foods high in fat, sugar or salt content.

Children who watch a lot of television are exposed to more food advertising. However, efforts are being made to reduce this.

Children who watch 20 hours of television or more per week (almost 3 hours per day) are twice as likely to be overweight or obese as children who watch less television.

Major influences on food selection



Before it ends up on our plate



We should eat more of some foods, less of others

Good nutrition can contribute to quality of life, help to maintain healthy body weight, protect against infections, and reduce the risk of chronic diseases and early death. Poor food intakes and related health problems are very common in Australia. So what can we do about it?



What foods should we be eating?

With the exception of breast milk for babies, no single food provides all the nutrients we need for good health—so it's important to eat a wide variety of foods and avoid restrictive diets.

Dietary requirements vary between individuals, and by sex and age. But in general, most experts recommend we:

- eat plenty of fruit, vegetables, legumes (such as soybeans, peas and lentils) and wholegrain cereals (including breads, rice, pasta and noodles)
- include lean meat, fish and poultry in our diets, as well as dairy foods such as milk, yoghurt and cheese
- avoid eating too many foods high in salt, sugar and saturated fat, or consume too much alcohol
- drink plenty of water.



Did you know?

The human body is made up of 55–75% water and needs fresh supplies everyday. About 6–8 glasses of water or other fluids can be consumed daily. People who are physically active, children, breastfeeding women and those in hot environments may need extra.

We should eat more of some foods, less of others



Are we eating enough of the right foods?

Infants

Most experts agree that babies should be fed only breast milk until around 6 months of age, when solid foods can be introduced in addition to breast milk.

In 2010, nearly all babies (96%) were breastfed initially. However at 6 months, just 15% drank only breast milk and 21% drank mainly breast milk with occasional water or juice.

For **children**, national nutrition surveys show:

- compared to dietary recommendations, most nutrients are adequate, although children are eating too much saturated fat and sugar and not enough calcium
- most are not eating enough fruit and vegetables
- older girls (aged 9–16) are not drinking enough milk.

For **adults**, national nutrition surveys show:

- compared to dietary recommendations, intake of most nutrients is adequate
- most (91%) are not eating enough vegetables and only 50% are eating enough fruit
- women are more likely to have inadequate calcium intakes than men
- 25% of men and 10% of women aged 65 and over are not eating enough protein
- 20% of adults are drinking alcohol at risky levels, men more so than women, particularly those aged 18–29.



What can we do to improve our diet?



Go for 2 and 5 (2 serves of fruit and 5 serves of vegetables a day)

Include calcium rich foods (2–5 serves a day)

Limit high fat/sugary foods (these should only be eaten occasionally—not every day)

One serve of vegetables can be:



½ cup cooked
vegetables or
cooked legumes

1 medium
potato

1 cup salad
vegetables

One serve of fruit can be:



1 medium piece
(e.g. apple)

2 small pieces
(e.g. apricots)

1 cup chopped
or canned fruit

What is a serve of milk, cheese or yogurt?



1 cup milk
(250mls)

1 carton
yogurt
(200g)

2 slices
cheese
(40g)

If you don't eat these foods, try:



1 cup calcium
fortified soy milk

1 cup almonds

½ cup tinned
salmon with
bones

We should eat more of
some foods, less of others



We're getting fatter

The number of people who are overweight or obese is continuing to rise—we have one of the highest rates of obesity in the world.

Body mass index (BMI) and waist circumference are the two main measures used for monitoring body weight.

How do I calculate my BMI?

BMI is calculated by dividing weight in kilograms by the square of height in metres.

So, a man 1.8 metres in height, weighing 80kg would have a BMI of $80/1.8^2 = 24.7$

underweight: BMI < 18.5

healthy weight: BMI ≥ 18.5 and BMI < 25

overweight but not obese: BMI ≥ 25 and BMI < 30

obese: BMI ≥ 30.

What is a healthy waist circumference?

Less than 94cm for men

Less than 80cm in women

These classifications may not be suitable for children, older people and all ethnic groups.

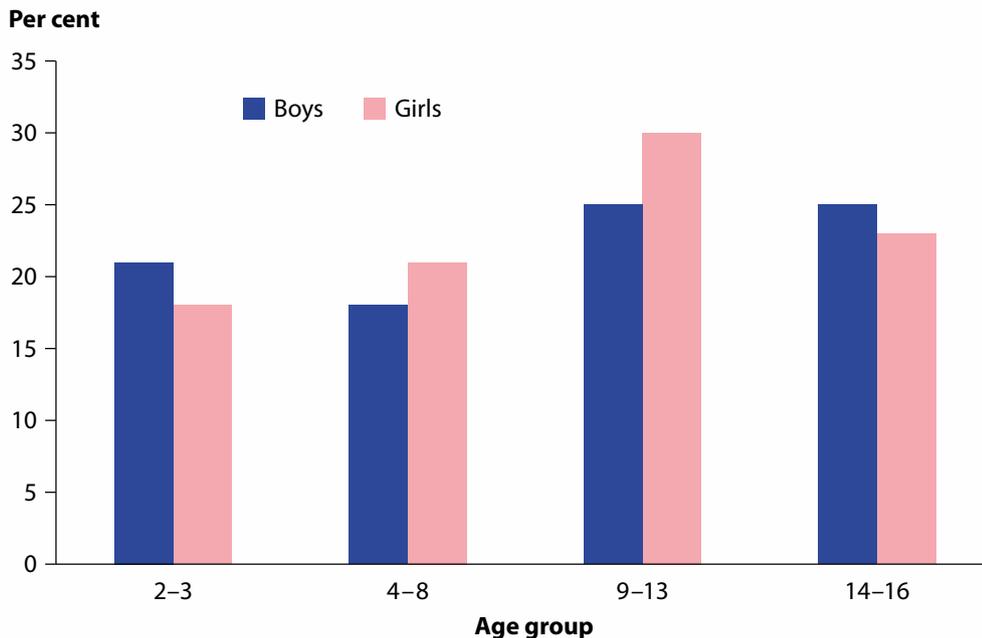


Based on the latest national data:

- 17% of children (aged 2–16) are overweight and a further 6% are obese
- 36% of adults are overweight and a further 25% are obese.

Although all children gain weight as they grow, excess body weight occurs when more energy is eaten than used. Excess weight increases the risk of poor health during childhood and of developing chronic conditions as adults. Overweight children are also more likely to experience teasing and bullying.

Children aged 2–16 who are overweight or obese, by age group, 2007



We should eat more of some foods, less of others



Processed foods—the good and the bad

Some foods undergo processing, for example, to extend shelf life, improve flavour, extend seasonal availability, or make them easier to store and transport.

Processing methods include canning, freezing, cooking, salting, smoking and milling.

Processing can change the nutrients in food. For example, heating food can destroy some nutrients, whereas freezing can help retain some nutrients.

Fortified foods contain added nutrients, for example, calcium in soy milks.

To address important public health concerns, in Australia, by law, bread-making flour must be fortified with folic acid and thiamin, and salt used in bread must be iodised.

Sometimes, manufacturers fortify foods voluntarily—for example, breakfast cereals are often fortified with vitamins and minerals.



Our world and lives are shaped by our food

Food is not only fundamental to our health and wellbeing, but our food supply system also affects the world around us.





Food waste

Food waste isn't just leftover food on our plates: it includes all food and resources (for example, water and fuel) wasted from paddock to plate.

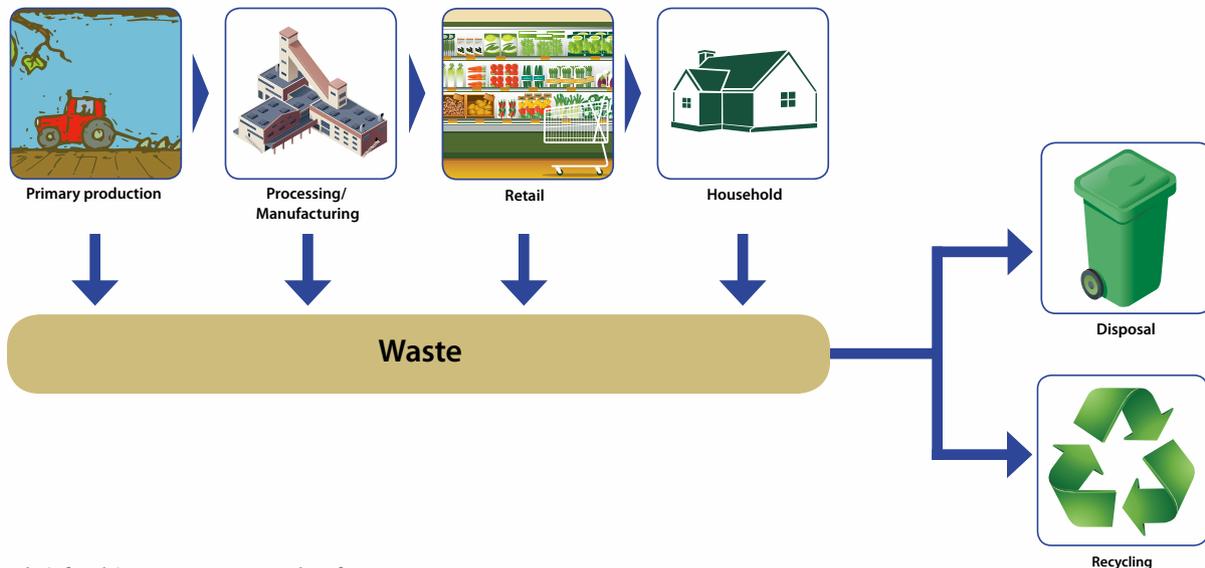
Up to half of all food produced worldwide is wasted. This causes nutrient losses and environmental effects, such as rapidly expanding landfill areas.

Each year, Australian households throw out about \$600 of food, and nationally we waste about \$5 billion of food.

The largest category thrown away in dollar terms is fruit and vegetables (just over \$1.1 billion per year), closely followed by restaurant and takeaway food and then meat and fish.

Households with higher incomes waste more food; those with incomes above \$80,000 waste an average of \$803 worth of food per year compared with \$518 for those with incomes of less than \$40,000.

Sources of waste in the food supply chain





The global food system

The global food system feeds more than 6 billion people, but not equally...

- more than 925 million people don't have access to sufficient food, mainly due to poverty
- more than 1.6 billion people are overweight and at least 400 million people are obese
- new technologies have made food cheaper and more accessible
- not all countries have benefited from these changes. As countries become more developed, overweight and obesity increases. For example, 8 out of the 10 countries with the greatest increase in obesity are developing or newly industrialised nations.
- some developing countries have increasing rates of obesity, yet still struggle with high rates of under-nutrition.



And it affects our world
and its people



In health, we are not all equal

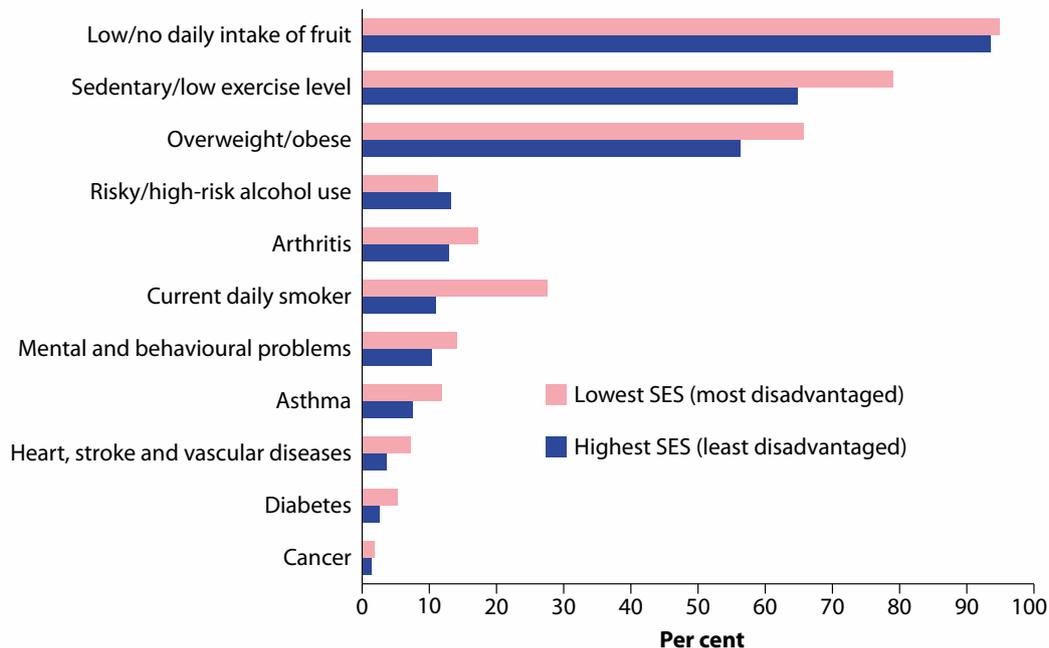
In Australia, like the rest of the world, the lower your socioeconomic status, the worse, on average, your health will be.

Aboriginal and Torres Strait Islander people, people in rural areas, those in disadvantaged areas and people with disabilities, generally have worse health than other Australians.

How inequality influences food choices and behaviours, and affects health is largely unknown and difficult to untangle.

However, it is clear that certain health risk factors are more common among these population groups and diet can be linked to these risk factors.

Proportion of people reporting selected long-term conditions and risk factors, by socioeconomic status, 2007–08



Did you know?

In Australia, basic nutritious foods in rural and remote areas can cost up to 30% more than in capital cities and be less available.

So there are important challenges ahead

Because food is so important to our bodies,
economy and environment, there are some
challenges to be faced in the future.





Global food security

Between 1950 and 2010, the world's population increased from 2.5 to 6.9 billion and by 2050 is expected to be 9.3 billion.

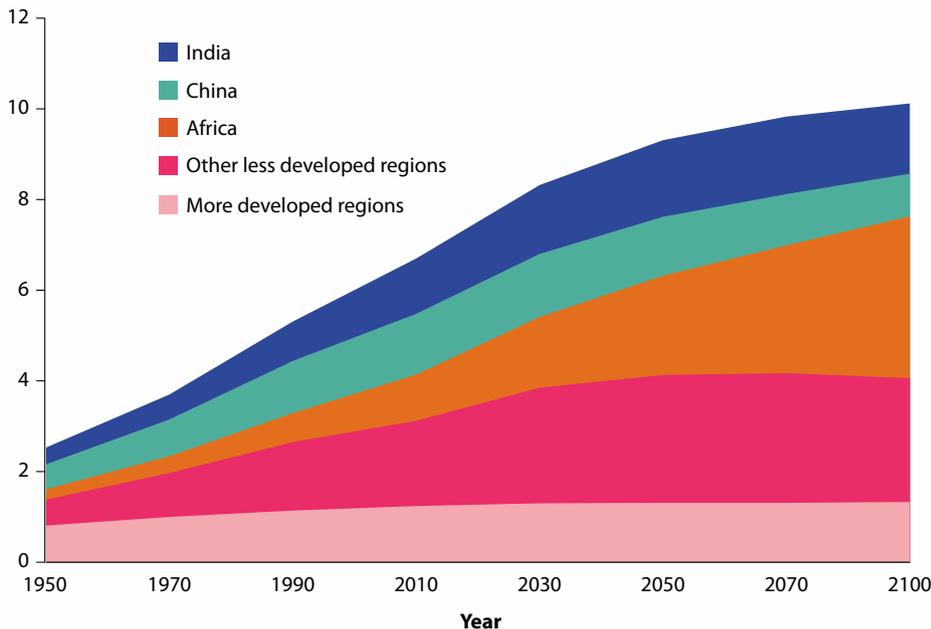
To support this increasing population, food production will need to double by 2050.

With more people living in cities, it is likely that food supply and demand will be affected. In 2011, more than half of the world's population lived in urban areas—an important shift from the 1950s when the figure was less than 30%.

Globally, urban dwellers generally eat more meat and dairy foods and less fibre-rich grain foods, whereas rural dwellers eat more cereals, tubers and roots.

World population growth, 1950–2100

Population (billions)



What is 'food security'?

The Food and Agricultural Organization of the United Nations states that food security exists 'when all people, at all times, have access to sufficient, safe and nutritious food to meet their dietary needs for an active and healthy life.'



Land, energy, water and the effect of humans

Global food production depends on land, water and energy (particularly fossil fuels) to produce, process and distribute food.

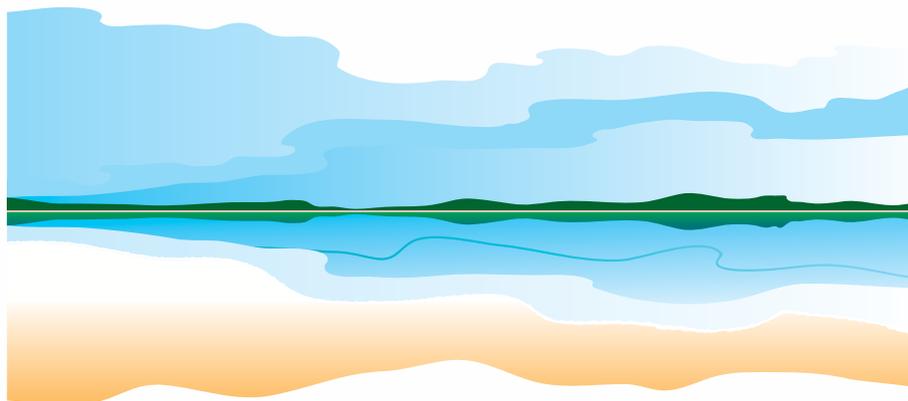
Fertile lands for food production are diminishing due to urbanisation, and land being increasingly diverted to mining and biofuel production.

Soils that are eroding, increasing in salt content and being depleted of nutrients threaten sustainable food production.

The world's supply of clean, fresh water is steadily decreasing, with demand exceeding supply in many parts of the world.

Agriculture currently accounts for 70% of freshwater from rivers, lakes and underground sources and most of this is used for irrigation.

Since 1961, the world's irrigated land has increased from 139 to 275 million hectares. This represents 20% of all cultivated land and provides more than 40% of the world's food.



Did you know?

The production of 1 kilogram of wheat requires about 1,000 litres of water, whereas about 5 to 10 times more water is required to produce 1 kilogram of meat.

So there are important challenges ahead



Biodiversity

Biodiversity is important to future food security, but is decreasing.

As a result, the food supply is becoming more vulnerable and potentially unsustainable.

- Fewer than 20 animal and plant species now provide most of the world's food and just 3 crop plants—wheat, rice and maize (corn)—supply more than half of the world's food energy.
- Although 25,000 plant varieties are available for agricultural purposes, fewer than 3% are in use today. This has dramatically reduced the diversity of plants contributing to food supplies and is known as 'genetic erosion'.
- Agricultural systems without much variation are more susceptible to pests and diseases, and are less able to adapt to environmental changes.

The Irish Potato Famine

Relying on one staple can be a problem. In the mid-1800s, a potato famine devastated Ireland's population and economy. Although the famine had many causes, the lack of genetic variation in Irish potatoes contributed to the severity of this disaster.

During this time, the potato was the staple crop for the poorest regions of Ireland and for more than 3 million people was their only significant food source. Farmers relied heavily on one main variety of potato, the 'lumper', as it produced greater yields than other varieties.

In 1845, a plant disease commonly referred to as potato blight spread rapidly through the poorer communities of western Ireland and caused massive crop failures, turning susceptible potatoes into inedible slime.

As a consequence, about 1 million people died of starvation and more than 1 million people emigrated.



Climate change and food production

Agriculture and food production are closely linked to climate change. Despite advances in farming practices, weather and climate are still major factors in determining productivity.

Evidence for climate change is growing, with increasing air and ocean temperatures, rising sea levels, and melting snow and ice.

The food and livestock industry is a major source of greenhouse gases, due to livestock emissions, soil disturbance, use of machinery and chemicals, food transportation and waste.

Agriculture contributes to greenhouse gas emissions through land clearing and methane releases.



Did you know?

According to some climate change experts, moderate increases in temperatures (1–3°C), along with increased carbon dioxide and rainfall changes, could benefit crop yields for some regions. However, warming of more than 3°C would have detrimental effects for all regions.

So there are important challenges ahead





Where can I find out more?

- *Australia's health 2012*
www.aihw.gov.au
- Nutrition Australia
www.nutritionaustralia.org
- Dietitians Association of Australia
www.daa.asn.au
- Department of Health and Ageing's Healthy Weight website
www.healthyactive.gov.au

Watch for the following:

- The revised *Australian Dietary Guidelines* and the *Australian guide to healthy eating*—expected by the end of 2010
www.eatforhealth.gov.au
- The National Food Plan—further information regarding its development is at:
www.daff.gov.au/agriculture-food/food/national-food-plan
- The National Nutrition Policy—further information regarding its development is at:
www.health.gov.au
- The Australian Health Survey—first results expected by the end of 2012
www.abs.gov.au/australianhealthsurvey



Australia's food & nutrition 2012: in brief presents highlights from the Australian Institute of Health and Welfare's 2012 report on the nation's food and nutrition system.

