

Food and our environment

People are getting more concerned about the effect of global food production on our environment and the people that grow and harvest our food. Here are some organizations that give information on food labels to show us the challenges ahead.



Carbon footprints for food

A carbon footprint is the total amount of carbon dioxide (CO2) and other greenhouse gases emitted over the life cycle of a product. The Carbon Trust has a carbon label which shows the carbon footprint of a product. Innocent Drinks which makes smoothies and Walkers Crisps both put carbon labels on their products. To use the label, the company must reduce their carbon footprint in the next two years and look at all their production processes to reduce the emission of greenhouse gases.



Fair Trade

Fair trade is about paying a fair price to people who produce food in some of the poorest countries of the world. Businesses work with suppliers to make sure that the workers are treated well and are given a fair wage. The FAIRTRADE mark is found on products which meet the tests and standards set by the Fairtrade Foundation. You will find the Fairtrade logo on packets of coffee, tea and sugar and lots of fruits such as avocados, bananas and pineapples.



Case study: The banana story

People that work in banana plantations were often paid low wages, with poor working conditions and over-use of agricultural chemicals, but things are changing. One in five bananas from the Windward Islands, in the Caribbean now carry the FAIRTRADE Mark and increasing sales are helping Windward Islands banana farmers survive. The farmers work together, holding weekly meetings to make business decisions such as reducing the use of chemicals in their farming, and to help each other. Thanks to the premium which comes with Fairtrade sales, school furniture has been purchased which means that children can attend class all day rather than for just part of the day, street lights have been installed, farm access roads renovated and a pre-school building has been built so small children no longer have to walk four miles a day to school.

Food Miles

The term Food miles makes us think about the distance our food travels from field to plate and the environmental impact of transporting foods around the world.

For example, we like to eat strawberries all year round, so in the winter these fruits are flown in from warmer parts of the world where they are grown. Years ago, we used to eat fruit and vegetables only when they were in season, but now 95% of fruit consumed in the is imported from other countries.

Some people question whether food miles matter. Research shows that tomatoes grown in Spain and brought to the UK may have a lower carbon footprint than tomatoes grown in the UK. Spain has a warmer climate, and in the UK greenhouses which grow tomatoes are heated during colder months and this increases the energy used.

Another report found that dairy and lamb produced in New Zealand and brought to the UK by ship, used less energy than UK meat because the animals can graze all year round outdoors, and less fertilizer is used in New Zealand than in the UK.

Where do they come from?

Anchor Butter	New Zealand
Baby sweetcorn	Thailand
Asparagus	Peru
Oranges	South Africa
Lemons	Turkey
Coconut	Dominica
Carrots	Wiltshire, UK
Broccoli	Morocco
Grapes	Brazil
Pomegranates	Israel
Raspberries	Spain
Blackberries	Holland
Bananas	Windward Island



Further Work



- 1 Copy the map of the world and draw a line to show the food mile journey for each product to travel to the UK.
- 2 List the journeys in order, starting with the shortest food mile journey.
- 3 Explain why you think each food comes from different places to the UK. For example, 'It is too cold to grow oranges in the UK so they must come from hotter places such as South Africa.'
- 4 Visit your local supermarket or look at their website and make a list of fruits and vegetables and where they come from.



Pomegranates from Israel



Butter from New Zealand



Pomegranates from Israel



Questions

- 1 Explain what is meant by carbon footprint and why it is useful for food companies to show this information on the label.
- 2 Give your views on Fair trade for food products – do you think it is

Eggs and nutrition

Eggs are one of the most nutritious foods we can buy and good value for money. There is no recommended limit on how many eggs we should eat – an egg a day is healthy.

Eggs are sold in four different sizes: small, medium, large and very large. Large eggs are used in recipes.

Eggs contain:

- easily digestible protein, needed for growth
- essential vitamins A, D, E and B group – but no vitamin C
- essential minerals iron, phosphorus and zinc
- low amounts of saturated fat, and only 80–90 kcal each.

Researchers have found that eating eggs for breakfast can help you feel full during the morning. This is useful for people wanting to lose weight as it stops them from snacking on calorie-rich foods.

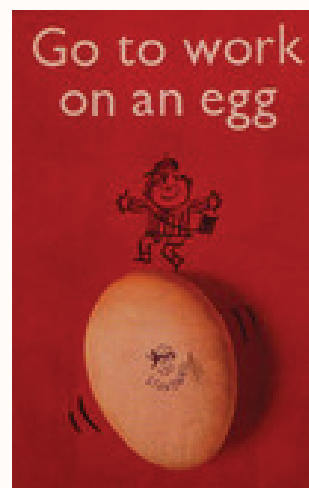
How do you know when an egg was laid?

Find the best-before date on the egg or the box.

Take off 28 days to find the laying day.

Is a brown egg better than a white egg?

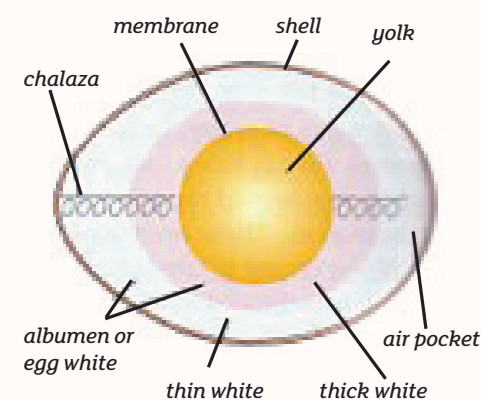
No, the taste and nutrition of an egg depends on the diet and health of the hen that laid it, not the colour of the shell.



The advert 'Go to work on an egg' was used in the 1960s to encourage people to have a good breakfast before they left home



Dummy Artwork of astonished hen laying an egg with a date on



Parts of an egg

Parts of an egg

A hen's egg is 10% shell, 60% white, 30% yolk. The eggshell is very strong but also thin and porous. When you crack an egg, you can see the thin membrane that protects the inside of the egg.

At the blunt end of the egg is an air pocket and this pocket gets bigger as the egg gets older.

The egg white, called albumen, surrounds the yolk, and is a thin solution made up of water, protein, minerals and carbohydrate. The yolk is held in place with two cord-like strands called chalazae. The yolk is a rich source of protein and iron. On the yolk the germinal disc contains some of the hen's DNA, and the young bird would develop here if the egg was fertilised. Eggs sold in the shops are not fertilised.

Food safety

Egg allergy is most common in children under 12 months. Few children are allergic to egg after the age of six, though in some cases this allergy can persist to adult life, especially for people with a family history of allergy.

Eggs, like any protein-rich food, need to be handled carefully.

- Store eggs at a constant temperature below 20°C.
- Store away from strong-smelling food – eggs are porous and absorb smells.
- Store away from raw meat – cross-contamination from the meat may occur.
- Wash your hands before and after handling eggs.
- Never use dirty, cracked, broken or washed eggs.
- Do not re-use left-over egg dishes.

May Contain Egg!



Eggs for caterers

Chefs can buy eggs ready shelled in liquid, frozen and dried form. Omelettes can be bought ready cooked, and hard-boiled eggs are cooked and shelled to use in products like scotch eggs and sandwiches.

The latest innovation for egg products is the 'extended shelf-life egg'. Liquid egg is pasteurised at a high temperatures for a short time and it has a shelf life of approximately one month.

<http://www.deansfoods.co.uk>

Produces a range of egg products for caterers

<http://www.aeb.org>

American Egg Board



Questions

- 1 Why do eggs make a good breakfast food? List three breakfast dishes that can be made from eggs. Describe how they are made and how long they take to cook.
- 2 If an egg box is labelled 'Best before 20 November 2008', when were the eggs laid?
- 3 Draw and label a cross-section of an egg. What is the value of each part?
- 4 What size egg is used in recipes?
- 5 Give three tips to store and handle eggs safely.
- 6 Give three reasons why caterers might buy their eggs ready shelled.



To do

Use the Internet to find out the following:

- 10 egg dishes that can be served for breakfast or brunch
- how caterers use large quantities of eggs in their cooking
- how chickens produce eggs – the egg-laying cycle
- what other kinds of birds' eggs we eat – find some recipes using these eggs.