

2 Environmental impact of the production of food

a) The following list shown you how much carbon dioxide (CO₂) is set free at the production of food and how much water is used.

Food	CO ₂ (kg)	Water (l)	Food	CO ₂ (kg)	Water (l)
1 kg apples (6 pieces)	0,55	420	1 kg potatoes	0,2	250
1 l apple juice		950	1 kg cheese	8,5	5000
1 banana		200	1 l milk	0,95	1000
1 kg bead	0,75	1300	1 kg pasta	0,9	1400
1 kg butter	23,8	4800	1 kg oranges		500
1 kg eggs (about 17 pieces)	1,95	3300	1 l orange juice		850
1 kg vegetables (fresh)	0,15		1 kg beef	13,3	15500
1 hamburger		2400	1 kg chocolate (10 bars)		3000
1 kg chicken	3,5	3900	1 kg ham	4,8	5000
1 kg coffee (ground)		21000	1 kg pork	3,25	4800
1 cup of coffee (125 ml)		140	1 kg tomatoes (field-ground)	0,35	180
1 kg cocoa		10000	1 kg sugar	1,5	1500

b) As you can see the environmental impact of these foods varies to a great deal.

Try to *understand* the reasons! Think about the different ways how things are produced. Take a new piece of paper and draw a scheme of the production process. The following examples are highly simplified – your sketches should be a lot more exact. Take into consideration for example which forage plants are fed to the animals and where these are grown. Get your information in your school books or on the internet.

Your should enter into your sketches as exactly as possible where water is used or polluted during the production process, where energy is consumed and where global warming gases are set free.

Apple: apple tree → apple → food at school

Butter: forage plants → cow → milk → butter → food at school

Potato: potato plant → potato → food at school

Milk: forage plants → cow → milk → food at school

Pasta: cereal → grain → flour → pasta → food at school

Beef: forage plants → cow → meat → food at school

Pork: forage plant → pig → meat → food at school

c) Now you have got to know some specific food better. Try to generalise your findings.

The following kinds of food are rather environmentally friendly (in terms of global warming gases and virtual water):

.....

As soon as you've arrived at this point, present your results to your teacher!

