

## The Price of Food

*Contents:* Survey, analysis and discussion concerning the factors affecting the price of food items.

*Time:* Homework time plus 2 periods or more, depending on amount of discussion.

*Intended use:* GCSE Biology and Integrated Science. Links with work on food production, food chains and food preservation.

*Aims:*

- To complement work on food
- To develop awareness of some of the factors influencing the economics of food production
- To develop awareness of some of the problems of agricultural economies in developing countries
- To provide opportunities to practise skills in classification and analysis of information, and opportunities to enter into group discussion.

*Requirements:* Students' worksheets No. 208. In case some students are unable to carry out the food survey at home, it would be useful to have a range of food items available in the lesson.

This unit is in two parts.

### Part 1

This is a survey of different foods, and is best carried out at home. Students should be encouraged to consider as wide a range of foods as possible. It will not be possible to fill in all the columns in the table for all the items — in particular, columns 6 and 7 on country of origin and country of processing may be difficult to complete, and the teacher may need to help here.

### Part 2

It is not intended that students should have definitive answers concerning the price of food. This would be impossible in such a complex situation. Rather, they should get some feel for the factors which determine price.

This part of the exercise would be best done working in small groups, say of three or four. This will increase the range of foods involved and encourage discussion. It would be particularly valuable to include children from different cultural backgrounds in the same group.

### Further points for discussion

These widen the issue further, and in particular consider some of the problems involved with production of export crops by developing countries.

*1 and 2* Students will realize that a lot of Britain's food comes from overseas. The teacher might like to remind students of the efforts made during the Second World War to make Britain self-sufficient in food. It is generally accepted that self-sufficiency is quite possible, though it would mean a reduced choice of food.

*3* Often food is produced overseas but processed in Britain. Processing food adds value, so the producer country could increase revenue by exporting processed rather than unprocessed food. But this requires a suitable technological base in the country concerned.

4 In some developing countries, the export of cash crops is the only way of earning the foreign currency needed to buy the manufactured goods exported by developed countries. In many cases the price of exported cash crops is kept low because of the low wages paid to agricultural workers in the exporting country. Coffee, tea and cocoa are classic examples: for cash crops like these, the producer country may get no more than 10 per cent of the final price.

5 Students may be interested to find that processing potatoes into potato crisps increases the price of potatoes many times. On the other hand, turning flour into bread does not give nearly such a large price increase.

No mention is made on the Food Price Factsheet of the complex matter of EEC subsidies and surpluses, though these do have a considerable influence on prices. Students might be interested to discuss the problem of food surpluses and the policy of paying farmers subsidies to produce food which is not needed, and may even be destroyed later.

*Acknowledgements* Figure 1 supplied by J. Sainsbury; Figure 2 reproduced by permission of Kandy Food Products.

## THE PRICE OF FOOD

Why does food vary so much in price? Why are some foods, like potatoes, cheap, while others, like steak, are expensive? In this unit you will be trying to find out some of the answers. In Part 1 you will carry out a survey of the price of different kinds of food. In Part 2 you will be looking at what decides the price of food.



Figure 1 The checkout at a supermarket

### Part 1 Food price survey (to be done at home)

This survey could be done just after someone in your family has been shopping for food. Try to get a variety of different types of food. Fifteen different items is about right. Try to include some fresh food and some processed food. In processed food, the basic food has been treated in some way. This is to make it more attractive, or more convenient, or to make it keep longer, etc. Examples are canned food, frozen food, dried food, 'instant' foods, etc.

It is interesting to include the same type of food both before and after processing. For example, you might include both potatoes and potato crisps, and both flour and bread.

When you have collected your food items together, draw up a table like the one below.

1 Food item	2 Processed or fresh	3 Weight in grams	4 Cost of item (pence)	5 Cost per gram (pence)	6 Country where the basic food was produced	7 Country where the food was processed
Desiccated coconut	Processed	227g	42p	0.18	Sri Lanka	?

Fill in the table for each item in turn. You should be able to get most of the information off the label.

Figure 2 shows an example — desiccated coconut. This example has also been entered in the table.

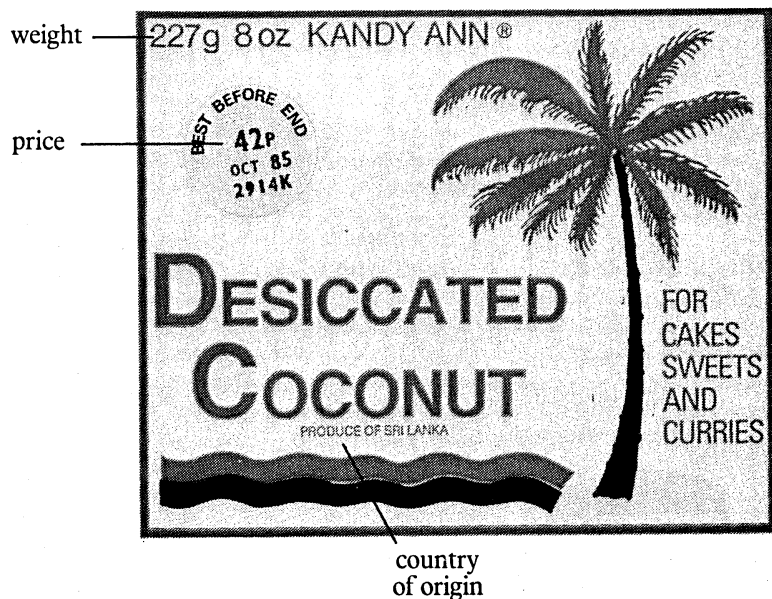


Figure 2 A typical food label

These notes will help you when you fill in the table:

*Column 3* Most packaged food is marked with its 'net weight'. This means the weight without the packaging. You may have to weigh the item yourself if its weight is not marked on it.

*Column 5* Work out the cost of each gram of the food. To do this, just divide the cost by the net weight.

*Column 6* Some foods (like the coconut in the example) have their country of origin marked. This is the country where the basic food was grown. This will not necessarily be the same as the country where the food was processed and packaged. For example, coffee may be grown in Brazil, but the coffee beans may be made into instant coffee powder in Britain.

If you cannot decide the country where the food was produced, have a guess or leave this column blank.

*Column 7* Try to decide from the label where the food was processed. For example, 'Made in Britain' suggests that the food has been processed in Britain. In some cases you will not be able to decide — if so, have a guess or leave the column blank.

## Part 2 What decides the price of food?

You will probably do this part at school. It is best to work in small groups. You can then look at examples taken from each other's food price survey.

### **Read the Food Price Factsheet before going any further.**

For some, or all, of the items in your list, think about what decides its price. Why are some items cheap, but others expensive? The Factsheet should help you. Remember that all sorts of things decide the price of food — you won't be able to get the answer completely right!

### **Further points for discussion**

- 1 How many of your food items contained basic foods that were produced in another country? Why were they not produced in Britain?
- 2 Would it be possible for you to live on food that came only from Britain? Would it be possible for *everyone* in Britain to do this?
- 3 How many of your food items were produced in another country, but processed in Britain? Why were they not processed in the country where they were produced? How would it help the producing country if they were able to process the food *before* exporting it?
- 4 Some countries grow certain food crops for export only. This earns them foreign currency. These are sometimes called 'cash crops'. Often some of the people in the countries that export 'cash crops' do not have enough food to eat themselves. For example, Nigeria grows peanuts for export, yet there are people in Nigeria who suffer from malnutrition. How has this situation come about?
- 5 Do you have some examples of food before and after processing — for example, potatoes and potato crisps, or flour and bread? If so, try comparing the prices before and after.

## Food Price Factsheet

### What decides the price of food?

Many things affect the price of food. It is impossible to say exactly what decides the price of a particular food item. However, some of the factors are described below.

- *Is the basic food easy to produce?* Some foods (like chicken or potatoes) are easy to produce in large quantities on the farm. Others (like asparagus or lobster) are difficult. Obviously, easily produced food tends to be cheaper.
- *Is the food produced locally?* If the basic food has to be transported long distances, this will add to the cost. In particular, food imported from far-off countries will cost more than if it was produced in Britain. This is especially true if the food is perishable (goes off easily). Perishable foods have to be specially transported, for example, in refrigerated ships.
- *Is the food an animal product or a plant product?* Animals which produce food for us are usually fed on plant food. Chickens, for example, are often fed on a cereal called maize. This makes a *food chain*, as shown in Figure 3. The chicken does not convert all the protein and carbohydrate in the maize into eggs and chicken meat. The chicken needs energy from its food to keep warm, to move around and simply to keep alive. More food is lost in the chicken's droppings. Only a small proportion of the food in the maize is used to make food for humans — eggs and chicken meat. This means that chicken meat and eggs are inevitably more expensive than maize. However, chicken meat and eggs are better sources of protein than maize.
- *Has the food been processed?* Food processing adds to the cost of a basic food product. In general, the more a food has been processed, the more it costs, though some fresh fruit and vegetables may be more expensive than processed ones.
- *Is the food seasonal?* Some food is only available fresh at certain times of year — strawberries are an example. At other times of year the food will have to be imported, making it more expensive. Alternatively, the food may be processed to make it keep longer so it is available all year round. Peas, for example, are seasonal but can be preserved by canning, freezing or drying.
- *Is the food popular?* It is cheaper to produce large quantities of food than small quantities. Unusual, less popular foods therefore tend to be more expensive. However, if lots of people want a particular food, and if it is in short supply, its price may be high. Fillet steak is an example. Fillet steak is the most tender and tasty steak you can buy. But each cow only provides about 3.5kg of fillet steak, compared with about 11kg of rump steak. That is why fillet steak is more expensive than rump steak.

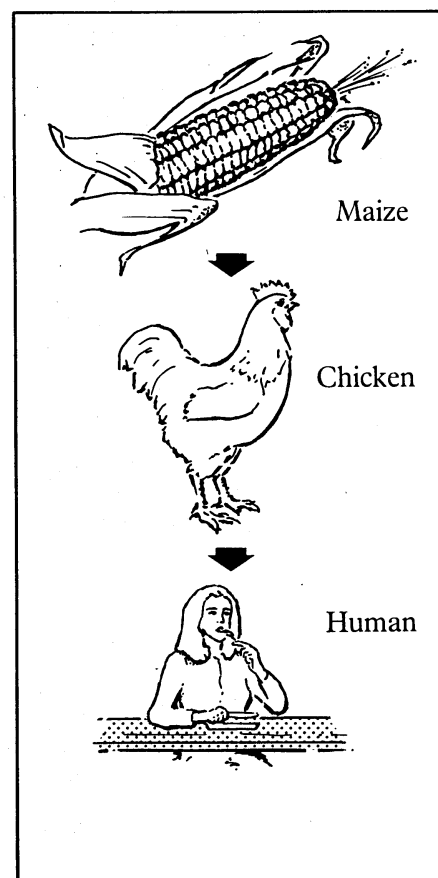


Figure 3 A food chain