



## 5-A-Day : Background Information for Teachers

The notes below provide some suggestions for student responses to the worksheet questions and additional information about the issues addressed.

1. Note that the distances given on data sheet 1 are approximate, from the capital city of each country. The food may have travelled a long distance within the country to reach an airport or seaport. The same argument applies once food has arrived in your home country. The distance travelled by the shopper to and from the supermarket is another factor for consideration.
2. Although it is possible to produce a wide range of vegetables and soft fruits in Europe during the summer, many 'tropical' fruits such as bananas, pineapples and mangos need to be imported.
3. This question was designed to provide an opportunity to discuss the idea of eating seasonal fruit and vegetables. Many locally-grown products are available instead in summer months. Whereas during the winter, soft fruits such as raspberries would have to be imported and the range of vegetables grown in N. Europe at least would be more limited.
4. Suggestions might include supermarkets, local greengrocers, farm shops, markets or farmers' markets, pick-your-own and grow-your-own. Pros and cons might include issues such as cost, choice, quality, taste, nutritional content, packaging, distance travelled and supporting the local economy.
5. Advantages could include saving money, freshness, taste, nutritional content and low levels of pesticides/fertilisers if grown organically. Problems might include lack of suitable space, crop damage due to pests, wind damage, too much/not enough rainfall/sun and the time needed to plant, weed, stake, pick and prepare the crop.
6. **Organic foods** are produced according to a set of carefully -controlled production standards. The use of conventional non-organic pesticides, insecticides and herbicides and fertilisers is greatly restricted. In most countries, organic produce may not be genetically modified. Organic food therefore contains much lower concentrations of

pesticide residues than conventionally grown foods, and its production has less environmental impact. However, it is usually more expensive and the yield is often lower.

**Fair trade** ([www.fairtrade.org.uk](http://www.fairtrade.org.uk)) is a movement that helps producers in developing countries and promotes sustainability. It aims to provide higher wages than are typically paid to producers and to help them develop the knowledge, skills and resources to improve their lives. It also guarantees that standards regarding working conditions, child labour and the environment are implemented. Again, Fair trade products may be more expensive.

There is no 'correct' answer to the complex question raised here but it should stimulate an interesting discussion, Issues to consider include:

- The methods used in food production (fertilisers, pesticides etc) and their effects on the environment
  - The importance of the income generated for poorer countries by exporting and selling excess food to richer countries
  - The positive influence of Fairtrade organisations on the quality of life of food producers in developing countries
  - The cost of the food product
  - The distance the food product has travelled
  - The importance of supporting UK food producers to ensure their survival and our future food security
7. Although the concept of 'food miles' has become familiar to many people, it is now understood that many other processes contribute to the carbon footprint of our food. A recent American audit of the greenhouse gas emissions of our meals looked at transporting and producing fertiliser for crops, methane gas emitted by livestock and the food's journey to market. On average, the final step added up to about 4% of a food's greenhouse gas emissions. Other factors to consider when considering a food's carbon footprint include processing and packaging, refrigeration and whether it has been grown in a heated greenhouse. For further information on these issues, refer to the following links:
- [http://www.bbc.co.uk/food/food\\_matters/foodmiles.shtml](http://www.bbc.co.uk/food/food_matters/foodmiles.shtml)  
<http://www.newscientist.com/article/dn13741-food-miles-dont-feed-climate-change-meat-does>
8. Suggestions might include freezing, canning, bottling, making jam. All of these processes require energy, either for the initial heating or long term storage.
9. Encourage students to make suggestions that they would be prepared to follow. Examples might be growing some foods at home, using local 'pick-your-own' farms and

farm-shops, cycling to the local greengrocers, only eating fruit and vegetables which are in season and choosing fruit and vegetables which have been produced organically.

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This publication has received funding from the European Community's Seventh Framework programme under grant agreement number 217751. It is licensed under Creative Commons Attribution-Noncommercial-Share Alike 3.0 License.

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