

## Activity 8: Impact Of Food Production In Conventional Agriculture

### Description

This is an activity designed to reflect on the environmental impact of the food we eat. Each group receives cards with food that they have to sort according to their impact. They are then given access to scientific data so that they can compare them with their own predictions and share them with the rest of the groups.

### Photos/Images



<https://www.freepik.es/fotos/cesta-comida>

### Competences addressed

#### Ecological competences:

- Environmental liability. Awareness of the impact of everyday life decisions on our environment and on the lives of others.
- Belonging. Generating a sense of belonging to a group that can have a greater impact than the individual.
- Analyzing information. Interpreting scientific data and relating it to everyday life.
- Applying information. Understand the environmental impact of different types and aspects of food production.

#### Social competences:

- Active listening. Listening to other people's opinions and ideas in order to build common knowledge.
- Cooperation. Awareness of the power of cooperation to face major problems of humanity.

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### Learning objectives

- The trainee understands the impact of the food industry on global warming compared to other types of production in the world.
- The trainee learns about different types of environmental impacts of intensive livestock farming and agriculture.
- The trainee compares the impact of animal products versus plant products on global warming.
- The trainee knows the impact of transport compared to the total impact of a food from production to consumption.
- The trainee understands the benefits of producing and consuming local products.

### Group characteristics

Activity to be done in groups of 2 to 4 trainees.

### Preparation for the activity

Print and cut the cards with the name of the products. Print a separate pack of cards for each group, as each group will do a different exercise. (Annex 1)

Print the solutions for each exercise. (Annex)

For the activity of representing the data, it will be necessary to have different materials such as beans, chickpeas, stones, wool, fabric scraps, coloured paper, wooden blocks, bottle caps...

### The activity / the content

#### 1) **Lead in: The price is right**

The participants get together in groups of two or three and have to estimate on a piece of paper or a blackboard some of the questions that the trainer will ask. Whoever comes closest to the exact amount will win 10 points.

- *The questions the trainer will ask are:*
- *What percentage of total greenhouse gas emissions are due to food production?*
- *What percentage of a product's emissions derives from transport, i.e. the fact that it was produced thousands of kilometres away?*

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- *How many tonnes of CO<sub>2</sub> equivalent are emitted to produce 1 kg of cheese?*
- *What about cabbage?*
- *And almonds?*
- *And beef?*

At the end, all the results are displayed on a panel or blackboard for further reflection.

### 2) Collaborative learning: Sort the line

Each team receives cards with the names of several foods. They should place them in a line according to the environmental impact they estimate they have on global warming, from the food with the most impact to the food with the least impact.

It is not necessary to have previous knowledge, the aim is to share the reflections, doubts, ideas and intuitions of all the members of the group in order to build common knowledge.

### 3) Compare and reflect: What the science says

Each group is given a table with emission values for each food, taken from a scientific study. They are asked to use this information to rearrange the cards.

### 4) Sharing the results

Each group briefly presents its results and reflections. A general analysis of all types of impact is made and the most important foods to avoid are concluded.

### 5) Optional: Represent data with recycled materials

If there is enough time, this phase of the activity is the most creative and challenging.

The groups are asked to represent in a visual way the numerical data they have been given. They can do this using all kinds of recyclable materials, e.g. they can use a pile of beans where each bean represents a tonne of CO<sub>2</sub>, or cut out a strip of paper where the length represents the amount of emissions... The more diverse materials they come up with, the more creative the participants will be.

Each group then presents their creations and reflections to the rest of the class.

Some questions for reflection:

- Do your estimates resemble the results found by the scientific community?
- What are the most surprising facts?
- Which foods have the greatest environmental impact?
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### 6) Reflection. Local production

The trainee then asks whether, with the information analyzed, it can be concluded that local production is more beneficial for the environment. After a short input, the participants are asked to give arguments for and against the consumption of local products taking into account the following aspects:

- Agro-diversity
- Production model
- Conditions for farm workers
- Nutritional quality of food
- Food processing

### Questions for reflection, self-assessment and conclusions

- What did today's activity consist of?
- How did you feel when you were confronted with scientific information?
- What information was the most surprising?
- How can we apply what we have learned in our daily lives?

### References

J. Poore and T. Nemecek, Reducing food's environmental impacts through producers and consumers. Science 01 Jun 2018: Vol. 360, Issue 6392, pp. 987-992 DOI: 10.1126/science.aag0216

Available on: [doi.org/10.1126/science.aag0216](https://doi.org/10.1126/science.aag0216)

Our world in data: <https://ourworldindata.org/environmental-impacts-of-food>