

Organic farming

In this activity you will decide on your answer to the question 'Why bother to save organic farming?' using the arguments presented in this letter as a starting point.

Dear Sir/Madam

I would like to have the choice to buy foods from certified organic farmers. I want my children to have food that uses no unnatural chemicals for fertilisers, pesticides or genetically modified organisms. I don't care if the biotechnology industry tells me that GMOs are good for me. I am old enough to remember the nuclear industry telling us that nuclear radiation was good for our health.

I can't see how these designer foods will solve the problems of feeding the world. We can't continue to feed the world forever if the population keeps growing. Eventually we will run out of room, unless biotechnology can make people much smaller. I can't see how gene technology will prevent the loss of farmland, much of which is due to industrial farming, and the heavy use of chemicals in fertilisers, pesticides and herbicides. Many of these new crops are designed to be herbicide resistant. Isn't that so more weed spray can be used? I also can't see how gene technology will help starving people in poor countries when we already produce more food than is needed to feed the world; it just does not get to the poor.

I remember when 300 types of food products made with genetically engineered corn in the US had to be recalled because its use had not been approved. That corn may not be harmful for people, but how do we know it's safe? Any health risks may not show up for years. Should the public have to spend all that money to prove things are harmful before it is taken off the market?

Also, I am not sure I want a few big companies controlling our food. A handful of agrochemical companies now own 35% of the world's seed supply. These companies are adding a gene to traditional plants and then putting a patent on them. Peasant farmers in developing countries will have to buy seeds rather than save seeds from each crop to replant the following year.

You may like to check out more about organic agriculture before you start:

- Biological Farmers of Australia: <http://www.bfa.com.au/>
- Department of Primary Industries NSW:
<http://www.agric.nsw.gov.au/reader/organic>

What to do:

1. Working alone, read the letter and then write:
 - a summary of the arguments presented by the writer
 - a list of the things the writer assumes are true.
2. Work in a small group of 3 or 4 students to:
 - share your summaries with others in the group
 - discuss whether you think the arguments made in the letter are good ones
 - discuss whether scientists should be responsible for:
 - the effects of new technologies on peasant farmers in another country
 - patenting of plants
 - effects on other sectors such as organic farming.

Sustainability and biotechnology

Sustainability is about fairness to future generations. It refers to the ethical principle that we should leave our children the same amount or more resources, energy, space and environmental amenity that we enjoy. Another way of saying this is not to use resources faster than they replenish themselves naturally.

In groups of 3 or 4, list ways that:

- biotechnology can help us achieve a sustainable society (e.g. improve pollution control)
- biotechnology can hurt our chances of achieving a sustainable society (e.g. increasing monoculture).

The precautionary principle and biotechnology

The precautionary principle means that just because we don't have scientific proof that something is harmful to the environment, we should not postpone measures to prevent environmental harm. It suggests that those who want to introduce a new technology should prove it is safe.

In groups of 3 or 4, list ways that the precautionary principle can be used to argue:

- against the use of gene technology (e.g. introducing new feral species)
- for the use of gene technology (e.g. cleaning up contaminated sites).

It takes a long time, sometimes decades, before some illnesses due to chemicals in food or the environment appear. This is why some agrochemical firms have argued that it is impossible to prove biotechnology is absolutely safe. It is also why some environmentalists have argued that it is impossible to prove biotechnology is absolutely unsafe. What do you think? Who should decide? Does it matter if we are talking about gene technology or traditional selective breeding?

3. Compare this letter with the one in the worksheet '*Why bother saving the bilby?*'

Draw up a table like the example below so that all contributions to this class discussion can be written up.

Points of view	For	Against
Economic	e.g. money from exports	e.g. impacts on organic farming
Scientific		
Cultural		
Other		

Everyone in the class should contribute at least one view for or against gene technology. These should be written in the appropriate place in the table. Discuss any points that members of the class want to question or clarify. Compare this table to the one the class made for the letter called *Why bother saving the bilby?*

3. Would using biotechnology to save the bilby:
 - be a good or bad application of the precautionary principle?
 - be good or bad for sustainability (e.g. does it keep future options open)?
4. Would using GM crops instead of organic farming:
 - be good or bad for biodiversity (e.g. reduction of seed varieties, reduction of pesticides)?
 - reflect an anthropocentric viewpoint or not?
5. Both letters raise questions about the interdependency and complexity of the natural environment. There seems to be more public controversy about the use of gene technology in agriculture and in the environment than about medical uses of gene technology.
 - Discuss why this might be the case.
 - Do you think that something can appear safe in a carefully controlled laboratory experiment, but create problems in a complex and wide-open natural system?
6. Write a reply to the letter, which reflects your views about the conservation of organic farming and the survival of small farms and existing communities.