Unit 7 Taking a Point of View: GM Foods

Summary and context

The three lessons described in this unit could be limited to one week of literacy with an additional extended writing session. Alternatively, the three lessons could fit into a more extensive unit of work, which could either occupy up to two weeks of literacy time or science or geography. The subject area and approach used in this unit would be particularly suitable for the delivery of the citizenship and education for sustainability aspects of PSHE.

The full week of work would begin with the examination of a balanced report on a controversial environmental issue. We suggest using World Wildlife Fund material produced in *Junior Education*. Note making is modelled and children are expected to collect summary arguments from the text representing one point of view. The notes are developed into a structured argument and are shared through debate. The outcome is a balanced 200-word argument complete with a personal recommendation.

The unit is organised as a 'jigsaw'. Children's written work will be done individually. However, there is an expectation of collaborative work en route. Children will work in 'home groups' (their usual literacy groups) and 'expert groups'. They will also work in role for the debate and as government advisers for the final writing.

Overview of objectives

Target statements for writing	NLS *Framework* objectives
Style: sentence construction	
▮ Write complex sentences, selecting and using a wide range of subordinators.	Y5 T3 S6
Style: language effects	
▮ Use language precisely and selectively in relation to text types, for instance to persuade or convey information.	Y5 T3 T15
▮ Use appropriate grammatical features for different text types.	Y5 T3 T14

Target statements for writing	NLS *Framework* objectives
Purpose and organisation	
▮ Use a repertoire of causal and logical connectives as well as those that signal time, e.g. *however, therefore, next, meanwhile*.	Y5 T3 S7
▮ Adapt writing to be concise and clear, and use an impersonal style.	Y5 T2 T22
▮ In non-fiction writing, use basic features of text types, such as introductory statements, followed by clear points leading to a conclusion.	Y5 T3 T14
Process	
▮ Use different ways to plan writing, e.g. notes and diagrams.	Y5 T3 T18

Outcomes

- Individual pupils draft connected prose, developing clauses, using connectives and extending sentences in support of an argument.
- Pupils will make effective notes summarising a point of view, initially by highlighting key words in given texts.
- Pupils will compile a class dictionary of technical words and generate definitions collectively.
- Debate an issue in role.
- Balanced summary of arguments, written in role as a government adviser.

Homework

- Make a list of definitions of *'New to me'* words.
- Investigate the range of vegetables and fruit available at supermarkets and compare cost, origin and appearance of organic with non-organic.
- Collect any visible policy statements.

Suggested text

'Our World Oceans', World Wildlife Fund, *Junior Education* October 2000

Resources

- Background reading for teachers (attached)
- A selection of texts is included with this unit (but teachers might want to use their own):
  - Text 1: *The case for organic farming*
  - Text 2: Reasons to eat organic food
  - Text 3: The GM protesters' case
  - Text 4: The case against GM food
  - Text 5: The case for GM food
  - Text 6: Reasons for supporting the growing of GM crops
  - Text 7: A farmer's point of view
  - Text 8: 'Maximart': a supermarket's point of view
  - Text 9: Memorandum (from the Prime Minister's office)
- *Writing Frames*, Maureen Lewis and David Wray (University of Reading)
- *Grammar for Writing* p.187
- Large card split into alphabetical ranges
- Whiteboards and pens

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Lesson 1

Lesson objectives

- (CS) to read a passage and make notes about the key points;
- (CS) to make a glossary of words and compose explanations.

Shared whole class work

- Explanation of the organisation of various groups could be done outside literacy hour. Read memorandum from PM's office (Text 9) to set the scene and set expectations of the task.
- Read an extract from the case for organic farming (Text 1).
- Model taking notes, highlight key words and write as notes.
- Group notes using different coloured pens.
- Identification of technical vocabulary. Work together to create definitions. Begin class dictionary.

Key points to highlight

- Skimming text to make useful notes
- Identifying and collecting technical terms and using notes to construct definitions.

Independent/guided work

Independent task

- Children read text in pairs and discuss main idea.
- Highlight key words and make notes as modelled in shared whole class work.
- Children collect technical vocabulary on Post-it notes as they read.

Guided task

- Teacher joins one of the 'expert groups' to support note making.
- Additional adult supports focus group.

Plenary

- Collect Post-it notes of new technology.
- Work as a class to create definitions, picking up on any misinterpretations.
- Begin to organise this new vocabulary into a class dictionary.

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Lesson 2

Lesson objectives

- (CS) to use notes to help when talking to the whole group.

Shared whole class work

- Using shared notes made in previous lesson, teacher presents an argument to the class.
- Children to work within 'expert groups' and organise their own notes to support a presentation to the class.

Key points to highlight

- Using notes to construct an argument to present to a group.
- The conventions of a debate.

Whole class task

- Children work in five 'expert groups', e.g. supporters of the case for GM food, supporters of the case against GM food, and representatives of the Soil Association, the biotechnology industry and supermarkets.
- Teacher-led introduction to debate.
- Each group to present own argument and debate.

Plenary

- Teacher-led recommendation.
- Modelling final paragraph of a discussion text.

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Lesson 3

Lesson objectives

- to use connectives to link clauses within sentences and to link sentences in longer text;
- to adapt writing for different audiences and purposes by changing vocabulary and sentence structure;
- (CS) to use the technical vocabulary in independent writing.

Shared whole class work

- Teacher uses notes collected in lesson 1 to model how to use notes to write extended text.
- Use connectives to write a range of compound and complex sentences. Have a range of these available on cards.
- Demonstrate writing in paragraphs.
- Continue work from lesson 1 plenary session organising technical vocabulary in alphabetical order and alphabetical ranges (e.g. a–e).

Key points to highlight

- Using connectives in own writing.
- Using notes to write an explanatory text.

Independent/guided work

- Children return to 'home group' (literacy ability group).

Independent task

General task:

- Children write a piece that presents a balanced view of the GM food issue, concluding with a personal opinion.
- Children to organise writing into paragraphs.

Guided task

- Focus group changing notes into text.

Plenary

- Selected children read aloud their reports. Others in class identify whether the piece has a balance of views and where and why connectives are used.

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Lesson 1 example

Teaching	Teaching and learning strategies
Objectives **Teacher:** *We've been given this task from the Prime Minister.* Display on OHP memorandum from PM's office (Text 9). Brief teacher-led discussion on the nature of the task set by the PM. **T:** *To do this work well we need to research the topics and to help us with this we are going to work on some texts about organic food and make some notes to help us form a balanced view.*	Shared reading of a whole text
Shared whole class work **T:** *To start us off I'm going to read this passage about organic farming – follow it through with me. If I read a word that is new to you mark it so you'll know you need to go back to it.* Teacher reads passage: *The case for organic farming* (Text 1). Fillet passages for relevant information and make notes. Begin to compile class dictionary of technical vocabulary. **T:** *In pairs re-read the passage. When you've finished share your ideas about what the passage is about. Talked about what the new words might mean. Remember to use the context to help you then we'll come together and I'll ask you to share with the class.* **T:** *Now we know what the passage is about, let's highlight key words to help us to make notes.* Teacher models note making, justifying reasons for selecting certain aspects of text and not others. Make links using coloured pens. Children point out unknown words and give suggested definitions. Teacher puts these onto individual Post-it notes.	Using text to follow and mark Paired discussion Report back Model note taking Collecting and cataloguing ideas

Teaching	Teaching and learning strategies
Independent task General task: The teacher should select four or five texts covering a range of aspects (see Resources p.3). Children work in ability groups with the appropriate texts. **T:** *Now we are going to read a range of texts about GM foods. Working in threes, I want you to discuss the main ideas in your piece. Then, remembering how we highlighted our shared text, one of you must jot down a few key words or phrases to help you to remember the main points in your piece. Another person should keep a list of words you don't know on Post-it notes.* An additional adult supports focus children within their groups.	Sorting and cataloguing ideas
Guided task Teacher works with chosen group. Revisit points made in whole class session, e.g. look for the main points; sort out unknown words; establish meaning from the context of the piece. Children to work through note making process using whiteboards. Collect unknown words on Post-it notes. An additional adult supports focus group.	Discussion partners
Plenary **T:** *Let's collect the new vocabulary you've found. Each group come and stick your Post-it notes onto this board.* Teacher to read one word and discuss definitions. Teacher gives each word a definition. Suggested homework: to make a list of definitions of '*New to me*' words. Teacher to ensure that each child has a copy of their group's notes for next lesson.	

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Lesson 2 example

Teaching	Teaching and learning strategies
Objectives **Teacher:** *Today you are going to use the notes you made yesterday to help you prepare a speech to the class. Remember you are an expert.*	
Shared whole class work Display notes based on lesson 1. In role, teacher presents an oral argument pointing at notes as each point is made.	Teacher demonstrates presentation of argument
T: *Can you hear how I've used these notes and expanded them into sentences?* This time write an example, talking through the decisions. Discuss emotive language and repetition of points.	Model writing
Whole class task Children are arranged into mixed ability 'expert groups'. These must be different 'expert groups' to those in lesson 1. Each group has a representative of more than two different points of view.	
T: *Using your notes from yesterday go and join your expert groups. I want you to spend 10 minutes working together to organise a speech, which you'll then present to the rest of the class. Each of you should deliver a part of the speech.*	Role-play Jigsaw method
Teacher to rotate around groups supporting individual children. After 10 minutes teacher to lead introduction to debate (i.e. in the role of chairperson). Each group presents argument to class and discusses any issues that arise.	
Plenary Teacher (as chairperson) to lead recommendations – summarising main points and coming to a conclusion. Though presented orally this should follow the structure of the concluding paragraph of a discursive text.	

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Lesson 3 example

Teaching	Teaching and learning strategies
Objectives **Teacher:** *Today we are going to change the notes you used yesterday to help with your speech – into full sentences. We are going to try to use some of the technical vocabulary – the new vocabulary – in your sentences.*	
Shared whole class work **T:** *Can anyone remind me why we grouped the notes together using different colours?* To link connected ideas together.	
T: *We're going to take this one step further today. We are going to expand our notes into a range of sentences but to make our writing more interesting we are going to use some connectives. Talk to the person sitting next to you, think of some good connectives.* Allow about two minutes talking and thinking time.	Discussion partners
T: *Let's collect those ideas.* Teacher to demonstrate changing notes into text – talk through process explaining word choice, sentence organisation, etc. It will be helpful to have a text prepared. Encourage children to give suggestions.	Listing ideas Modelling and demonstrating writing
T: *We've used some technical words here and we've collected some others over the last few days. We really need to organise these so that someone reading your report could find out what these words mean. What should we do? Any ideas?* Create a glossary. Teacher to work with class organising Post-it notes into alphabetical ranges a–e, f–k, etc. These could then be organised alphabetically as an independent task.	Questioning

Teaching	Teaching and learning strategies
Independent task Provide connectives lists to support writing. **T:** *Working independently I would like you to change your notes into full sentences using the range of connectives and write your piece for the PM.* *Before you begin see if you can link your notes together using different colours to help. Then try to use this to write in paragraphs.*	
Guided task Children work in middle ability groups to link notes into paragraph topics. Teacher to support this process, discussing children's decisions. Children use whiteboards and as a group to produce a shared report using connectives.	Outline strategies Support children to apply these in their writing
Plenary Beginning with guided group ask selected children to read aloud their report. Target questions about connectives used on lower achievers. Ask higher ability to try to improve sentence structure.	

Background reading for teachers

The first farmers

The first people on earth were hunter-gatherers (in other words, they ate what they could find living wild, both plants and animals). The first people we could call farmers lived around 8000 BC. Around this time some people began to stay in one place and grow their own food and keep their own animals.

Since this time people have always tried to improve the way they farmed. Of course as soon as people began to farm they began to observe things and to make choices. They chose plants which were good to eat and animals which could be kept quite easily. By trying different ways of growing different crops they were soon able to improve the amount of food they could grow in the time they had to spend and on the land they could farm.

Selecting plants

Farmers have always tried to grow more food on the land they have (this is known as increasing the yield). At first this would mean selecting the best plants, saving their seeds and growing the next year's crops from these. It would also mean breeding from the strongest animals. Bit by bit this selection of the best would have made a big difference to the yield of the crop and the size and strength of the animals.

Changing plants

A plant or an animal will breed only with its own species but within a plant species such as wheat or an animal species such as sheep there are many variations. One variety of wheat may be short, another tall. The first may prefer damp land; the second might be able to survive very dry conditions. Normally, a plant will be pollinated by another of the same variety. Sometimes two different varieties exchange pollen and the seeds from this 'mixed' plant will grow into something completely new (perhaps a short wheat which can put up with dry conditions?). This 'mixed' plant is call a hybrid.

Hybrids will be different; they may be weaker than their parents but occasionally they may be stronger. They are accidents of nature but perhaps they can help us.

By 1700 some naturalists had begun to take a big interest in hybrids. Some realised that hybrid plants might help farmers to grow better crops.

Improving plants

Around 1856 a naturalist called Gregor Mendel made a very careful study of plants. He worked out how to breed plants to get the sort of hybrid that you wanted. Instead of just hoping hybrid plants would be bigger or taller, Mendel was able to work out how to breed them. Today we would call Mendel's work genetics. He did not understand how it all happened but he could predict what would happen when two different varieties were bred together.

Using these ideas in the 1900s people began to breed new varieties of plants.

Helping plants to grow

Scientists who study plants are known as botanists. Botanists were not the only scientists working to help farmers. In the last century chemists were also beginning to make a difference (chemists study the effects of chemicals). Chemists began producing chemicals to kill plant diseases and insect pests (pesticides) and to kill weeds (herbicides). They also could make compounds to add to the soil to improve plant growth (fertiliser). If they could afford to buy chemicals farmers began to use them. The combination of specially bred varieties of plants, and herbicides, pesticides and new farm machinery meant that by the end of the 20th century farmers could grow at least three times as much food on the same amount of land as they could in 1950.

Creating new plants

The latest science that could change farming is known as genetic modification (GM). Gregor Mendel knew that plants would sometimes end up like one parent or the other but he did not fully understand how. Scientists now do understand how a plant or an animal (or even a person!) is like its parents. This is not easy to describe simply. Within each cell of every plant or animal is a very complex string of chemicals called DNA. The DNA in each new plant or animal has one half from the male ('father') and one half from the female ('mother'). It is a bit like a zip fastener with two sets of teeth locked together. Every tooth on the zip controls something about the way the plant/animal will look or behave as it grows. Each 'tooth' is called a gene. Every living thing has its own unique set of genes. Scientists have known about this since 1953 and by 2000 they knew exactly the pattern. It is now possible for scientists to take a single gene from one plant and add it to another.

Scientists can now make a brand new plant in the laboratory.

In America and Canada they are already growing maize, soya and tomatoes that have been changed in the laboratory.

Has farming just got better and better?

The answer to this will depend upon who you ask. This is a very complicated question; this is why we are asking for advice.

One thing we do know is that there have been some serious mistakes as well as many improvements.

Many of the earth's earliest people must have poisoned themselves trying out different things to eat. Ever since then people have made mistakes. The latest big mistake was 'mad cow disease' (BSE) caused by feeding cows the wrong things.

The future

The question for us to consider now is do we need to carry on with using new science to produce more food (after all, there will be twice as many people in the world in 50 years' time). Or should we stop messing around with nature and try to grow food in a more natural way?

The case for organic farming

(Source: Soil Association)

We believe that we need to make farming sustainable. By that we mean that not only will it be good for the present generation but also it will not do any damage to the earth so it will be good for future generations. We do not think farming is truly sustainable unless it is organic. Organic farming relies upon building up the fertility of the soil naturally so that it can still be farmed like this for years and years to come.

What is organic farming?

It is farming without using herbicides to kill the weeds, or pesticides to get rid of insect pests and plant diseases.

Organic farming relies upon growing plants in well-looked-after soil so that they grow strongly. Pests are dealt with naturally by their natural predators. Strong plants can shake off plant diseases.

The principle behind organic farming is to work with nature. For example, instead of growing one crop year after year, if crops are rotated, the soil is given a chance to recover. Manure from farm animals can provide the fertiliser instead of using chemicals. Some crops are grown especially to plough into the soil so that it is improved. Wildlife is encouraged so that creatures such as earthworms will improve the soil; others like ladybirds will prey upon unwanted pests such as aphids. An organic farm is biologically balanced.

Animals on an organic farm are reared without using drugs, wormers or antibiotics. You may not realise that on most non-organic farms animals are given these just to make sure that they do not become ill. The problem with this is that some of these drugs may end up being eaten in meat or cheese or eggs. Also by using antibiotics regularly we are giving the bacteria that cause diseases a chance to get used to the cure so they can resist it. When antibiotics are really needed they may not work. The bacteria may have become immune to their effects.

How do you know food is organic?

To be an organic farm and to sell vegetables, corn or meat labelled 'organic', farms are inspected at least once per year to make certain they are sticking to the rules.

Where can I buy organic food?

Organic food is usually pre-packed and labelled. Look also for the logo of the Soil Association. Many shops and supermarkets sell organic food but you will need to look at the labels.

Text 2

Reasons to eat organic food

- It is safe, nutritious and has not had anything added to it.
- No artificial chemicals (pesticides, herbicides, fertilisers) were used to grow it.
- It is environmentally friendly (wildlife is encouraged).
- GM food is banned on organic farms.
- There are strict rules about how animals should be looked after.
- Animals are not given medicines or drugs.
- Organic farming does not need to use fertiliser made in factories using energy to make it and using up the earth's supplies. We use natural manure!
- Less chance of diseases like BSE ('mad cow disease') from naturally fed animals.
- It uses science but it uses science to help the natural balance of nature, not to change it.

Source: Soil Association, Bristol House, 40–56 Victoria Street, Bristol BS1 6BY
Web site: http://www.soilassociation.org.uk/
E-mail: info@soilassociation.org

The GM protesters' case

(Source: *Northern Echo* November 2000)

Background

In 2000 the UK Government decided to continue to allow a number of farms to grow GM crops to test them. These crops were to be grown so that more information could be gathered. The crops were not to be sold for food. Because some people were concerned about these tests the Government decided that they should not be secret. A list of all of the farms was published.

One of the farmers was in County Durham. The farmer was growing a new GM variety of oilseed rape to test if it could be sprayed with a herbicide and survive.

On 30 October 2000 the crop was destroyed by people protesting about GM crops. The five people came from Manchester and from Dorset to destroy the crop. They were taken to court and charged with causing £2,000 worth of damage. In court this is what they said they had done and why:

> *The raid was planned at a friend's house. We planned to pull up the entire crop and put it into plastic bags marked 'bio-hazard'. We intended to take the bags to the police station. We dressed in white uniforms and spent four hours bending over the crop and pulling it out.*

The farmer arrived and then the police. The five were arrested. They said they had learned about GM food from a variety of sources over a long period of time. They believed that the crop could contaminate soil and affect other crops and wildlife. They said they felt they had to act immediately before damage was done.

Direct action, they believed, was the only answer.

The five defendants considered that their action was a contribution to halting something that could become a global disaster.

Text 4

The case against GM food

There are a lot of people with very serious doubts about GM food. Many people feel that after having food scares with eggs and a disaster with BSE ('mad cow disease') we should stop messing about with nature.

Those that know more about GM food have three different sets of worries:

- How safe is it to eat?
- What is its effect on wildlife?
- How it could change world farming.

Safety

Although the biotechnology companies claim that the new crops will be fully tested, how can they ever be sure? Because GM food is very new, nobody can really tell if any of it will do us harm if we were to eat it over a long period. For all we know we could eat something today which might cause us to die in 10 years' time. Why take this risk? Already in America 37 people are thought to have died because genetically modified bacteria was put into a food supplement.

If GM foods are allowed in this country we can never be sure that they have not been put into food we buy. We have no way of being able to tell.

The effect on wildlife

Genetic modification can make a normal plant like a potato produce its own insecticide so that it can kill any pest that tries to eat it. This sounds at first a good idea but it also kills other insects. What will this do to the food chain (no insects = fewer birds)?

What if:

the pests become used to the insecticides found in the GM plants. We could get resistant pests that cannot be killed with sprayed insecticides. Complete crops could be destroyed.

Genetic modification can make a plant withstand a strong weedkiller so that after spraying, all the weeds around it will die and only it will be left, but

What if:

- some of the seeds of this plant fall into the soil and grow the next year in the middle of a different crop – how could you get rid of them? Weedkiller wouldn't work!;
- some of the pollen from the crop fertilises a wild plant of the same species. The wild plant could become a 'superweed' and couldn't be controlled;
- there are no weeds at all. There will be no seeds. Weed seeds are the food of many small birds.

The whole idea of GM crops is very frightening. We simply could not control them once they had flowered and set seed. They are almost bound to escape and to breed with wild plants and other crops. It is possible that our wild flowers could be smothered by new plants and our insects and birds could simply disappear. Organic crops would be ruined as we could not be sure that they had not been fertilised by pollen from a GM food.

The effect on the world

It is true that in many countries people are starving. Lack of rain or poor soil are sometimes the problem but often the problem is simply that the country is so very poor or that there is a war going on. If really poor farmers had to buy their special GM seeds from a big company they simply could not afford to do it. Some people believe that GM crops may make things worse.

The last point is, why do it? Why take all these risks when we don't need GM food? In 1998 77% of people said that they were against growing GM crops in Britain.

The case for GM food

(Source: Biotechnology industry)

Farmers have always tried to improve the crops they grow. The world has been very glad of the improvements. Without these improvements the world would be even more short of food.

Ninety per cent of the world's food comes from 15 major crop plants (rice, wheat, potatoes, etc.). All 15 crop plants have been changed and improved.

The biotechnology industry attempts to find new methods to improve the taste, choice and yield of food crops. It also is working to help farmers make a profit and to help governments to prevent world hunger (the population of the earth is expected to double in the next 50 years).

Since scientists have discovered which gases change which part of a plant, they can swap some of them from one plant to another. This is known as genetic modification – GM. By producing new varieties of plants in our laboratories we may be able to solve many of the farmer's and some of the world's problems.

Here are some of our successes:

- A new variety of soya which impressed 87% of farmers who tried it in the USA. They were able to keep weeds away with less spray being used.
- A new tomato which makes thicker tomato paste. It is easier to turn into paste, making it cheaper.
- Apples, raspberries and melons that can stay longer on the supermarket shelf without going soft (less waste).
- Crops have been grown which produce their own insecticide, e.g. potato that needs 40% less insecticide to keep it pest-free.

Very soon it will be possible to grow the following:

- Wheat which can add nitrogen to the soil as it grows. This will mean that it can be grown on very poor soil without fertilisers.

- Potatoes which will not absorb so much oil when fried. This will make chips more healthy.

- Common food plants which may be made to produce extra vitamins or a chemical they would not normally produce. The food crop could act as a natural medicine. An example would be to add a gene to a food plant so that it produced beta-carotene (beta-carotene prevents a disease called night blindness).

None of this can happen if people are nervous of allowing farmers to use the new science (biotechnology).

There is no reason for fearing the new biotechnology. Many of these crops have been grown for some time in the USA and Canada; they are tested many times before they are allowed to be eaten as food. The American Dietetic Association has concluded that "foods produced using biotechnology are as safe as traditional foods".

We support the idea of labelling food. There is, however, no need for special label information to say that food is GM, as it is not particularly different from other foods.

Text 6

Reasons for supporting the growing of GM crops

(Source: Monsanto)

- Crops produce more (bigger yield).
- Crops can live in especially difficult conditions – very useful in hot, dry countries or on poor soil.
- Crops can be given extra properties, e.g. strawberries that stay sweet, potatoes that soak up much less fat.
- They reduce the use of pesticides and herbicides by making the crop more able to fight off pests and diseases.
- It can reduce the number of times a crop needs spraying with herbicide by making it resistant to one particular spray. This spray can then kill off everything else.
- The last two advantages make farming easier and cheaper. They can also help the soil as the tractor need not drive over the crop so often.
- GM foods are as safe as traditional foods (tested for safety by the US Food and Drug Administration (FDA)).
- Because GM crops provide more food on the same land they will help solve the world's hunger problems without using up more land. This land can be left for wildlife.
- Man has always used science to improve crops. We need to encourage this so that new science can benefit man.
- If British farmers are not allowed to use genetic modification then they will be at a disadvantage when trying to sell their food abroad.

Text 7

A farmer's point of view

I farm 110 hectares of land in County Durham. At the moment I grow mainly barley, wheat and oilseed rape. For the last two years I have tried growing potatoes but after this year's disastrous wet weather I don't think I will continue.

I have a small herd of suckler cows and I fatten about 100 store lambs which I buy in the auctions during October.

The last three years have been the worst my family can ever remember. Ever since the problems with BSE ('mad cow disease') it seems that the price of everything we sell has fallen, everything except the cost of the animal feed, pesticides and fertiliser.

Five years ago I sold lambs in March for £60, last year I was selling similar lambs for £30. The price of wheat is also lower than it was five years ago.

I'm not a politician and I don't know the exact reasons why things are so bad. Sometimes I get very angry about things. I seem to have to work longer and harder for less money.

You asked me for my opinions on organic growing and GM crops. (I should say that I don't grow either by the way!)

The first thing I would say is that the Government must make sure that we don't end up with another food scare.

The truth is I don't know enough about GM crops. From what I have read from the seed companies there could be a lot of advantages. On my wetland it would be a big advantage not to have to spray the crops so often. Also if they could produce a variety of barley or potatoes that would be ready to harvest earlier it might prevent me having crops spoilt by autumn storms.

I can see the GM crops might be easier for me to grow. They may be cheaper to grow if the claims of the seed companies are true. However, I am a bit worried that I might end up having to buy my seed from one or two companies. I just don't like to be dependent on an outside company.

I think there are quite a few questions that need to be answered before I personally would grow GM crops. Perhaps the biggest is, will the public buy the food?

At the moment I am not allowed to grow GM food for sale even if I wanted to. One thing the Government must do is make sure we are not treated unfairly. We cannot have one rule for Great Britain and a different one for Europe. If a farmer in France or Germany can grow cheaper wheat or barley what chance have we got of selling ours?

I have thought about growing organic crops and keeping my lambs organically. At the moment it would not be worth my doing it. If I grow my crops organically I will get a smaller yield (not as big a crop). That is OK as long as I can sell it at a better price.

At the moment I'm not sure people are prepared to pay extra and it would certainly cost me more to grow GM crops. I would need help to change over.

Perhaps the Government could help with an extra grant of money – after all, it will help the environment too.

Text 8

"Maximart": A supermarket's point of view

Advice to scientific committee

The important issues from our point of view are that we need to provide our customers with:

- consistent good quality (in other words the food has got to be always top quality – not sometimes or usually but always);
- a choice (we offer organic vegetables as well as our normal range);
- safe food – we need to know that it is safe. We need to know exactly where it has come from and how it was produced;
- good value. No matter how good our food is we owe it to our customers to offer it at the keenest prices.

You ask how the farming industry can help us to provide this range of food.

Firstly, by being very careful to produce food hygienically in a clean and organised farm. We choose our farmers and inspect their farms. It certainly helps people to be confident that food is safe if we can label it to say exactly where it comes from.

We offer a very wide range of organic food. All of this is clearly labelled. It is our policy to label all of our food fully. Could regulations on labelling be made stronger?

One problem we have is that not enough British farms are producing organic food. We end up buying from other countries and we would prefer to buy British. Perhaps the Government might consider encouraging farmers to change to organic growing.

Our company does not sell GM food and we make sure that none of our ready-made food contains GM ingredients. Why do we not sell it? Firstly because we do not believe that we can be certain of its safety. We consider that there must be a long period of testing

before GM ingredients are allowed to be used in foods. Secondly, our customers do not want it. Seventy-seven per cent of the British public do not want GM crops to be grown in the UK (MORI poll June 1998).

We would support very strict rules for labelling GM foods. This is the only way our customers can be totally confident that they are not buying them. Also if other companies use GM foods to make a cheaper product the customer should be told.

We also believe that meat should be labelled to show the country of origin (which country the meat came from). We, for example, have a policy of selling British pork, partly because we know that in Britain there are rules to make sure the pigs are kept in reasonable conditions. Sometimes we have to pay more for British pork. It is unfair if other companies can sell cheaper pork from other countries without having to say where it came from. We also sell organic pork where the rules are even more strict. Some customers are happy to pay more.

Text 9

MEMORANDUM

From: the Prime Minister's office

Subject: Food and Farming Conference

You will I hope remember that by Friday of this week I need a briefing paper on the future of food and farming. The conference begins Monday and it needs your views to help me prepare my major speech.

I am aware that we have been receiving a great deal of advice and persuasion from a variety of organisations.

What I need you to do is to summarise the arguments put forward from these people.

I am particularly interested to have the views about the following issues:

Organic farming – should Government encourage this?

GM food (genetically modified food) – should Government encourage this?

I would like to have not only your views but any evidence you consider important from the following:

- The Soil Association
- The GM seed companies
- The farmers
- The protesters
- The supermarkets.

Finally, I would appreciate your balanced opinion having set out these views. Rather than notes please let me have a written report of around 200 words in your usual excellent English. I intend to send your report to the newspapers for publication ahead of the conference.

Yours sincerely,