

Write your name here	
Surname	Other names
Edexcel Principal Learning	Centre Number
	Candidate Number
Environmental and Land-Based Studies Level 3 Unit 6: Plants and Animals – Safe Working Practices and Relevant Legislation	
Thursday 21 January 2010 – Morning Time: 1 hour	Paper Reference ES306/01
You do not need any other materials.	Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*

Information

- The total mark for this paper is 50.
- The marks for **each** question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

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Answer ALL questions. Write your answers in the space provided.

- 1 Trialgro is an agricultural research company. It is in the process of developing new crops that will provide increased yields and greater disease resistance for UK farms at a time when food self-sufficiency is hitting the headlines. It is involved with the development of both hybridised and genetically modified (GM) crops.

Over the last 30 years some crops in the UK have been infected with new pests and diseases. It is vitally important to the agricultural industry that these are kept under control. One method of helping to control the spread of pests and diseases is by the use of Quarantine Identification Cards (QICs).

- (a) Explain the role of QICs in helping to control the spread of pests and diseases.

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(b) Explain the benefits of having legal controls on plant quality.

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As part of its work on hybridisation, Trialgro needs to bring in new plant stock from the Netherlands. It is important that these plants are not carrying any pests or diseases which could then be released in the UK.

(c) Discuss the role of plant import procedures in ensuring that these imported plants from the Netherlands are pest and disease free.

(8)



The development of GM crops is not welcomed by everyone, despite its potential to increase global food supply. For Trialgro, an issue is the concerns of environmentalists, as to the possible effects on the present fauna and flora. See Figure 1 below.

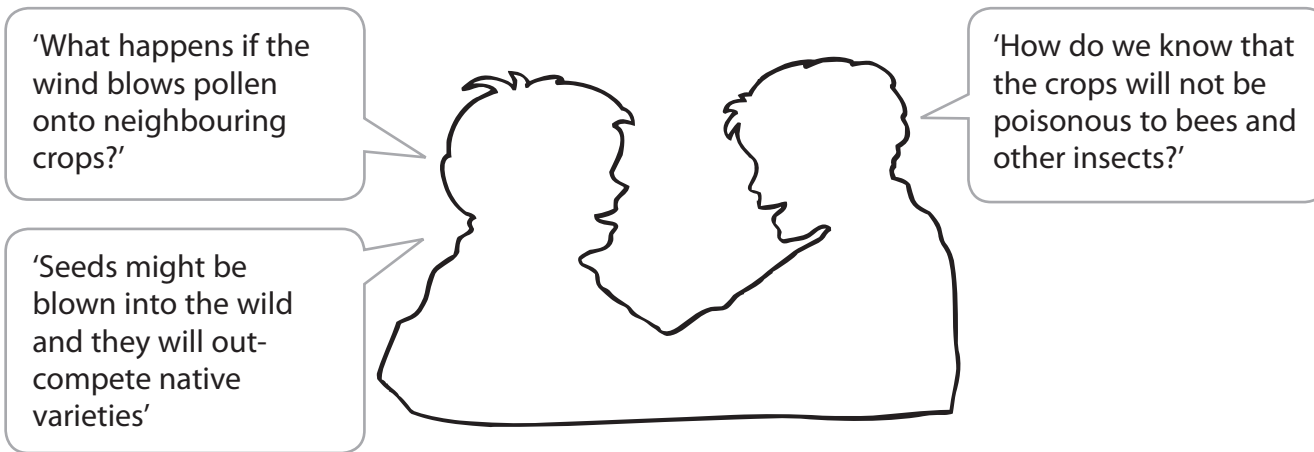


Figure 1

Trialgro carries out risk assessments before planting any new GM crop and this may dispel the concerns of environmentalists.

(d) Explain how Trialgro would conduct a risk assessment to try to minimise the possible danger to the environment.

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(Total for Question 1 = 24 marks)



2 Trialgro also has to deal with problems facing a commercial farm. One of its ongoing battles is against potato blight. The key information that Trialgro has to consider is:

- potatoes form a part of Trialgro's hybridisation process throughout the year
- last year a control field of potatoes showed signs of potato blight in one small area
- potato blight affects the length of time for which potatoes can be stored.

As soon as the disease is identified, the standard procedure is followed. The affected crops are lifted and an area the same size around the affected area is also cleared.

(a) Explain why Trialgro needs to carry out this procedure.

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In 2009, Trialgro's management needed to consider the following:

- the roof of the main storage barn needed repair
- potato-pickers were carried on an open trailer to the field area in which they were working
- in August the swine flu outbreak meant that Trialgro was short staffed and staff were working long hours every day without a break for three weeks
- 25kg bags of potatoes from the trial plots were manually loaded onto the open trailer for transport to storage barn.

(b) Identify **three** different hazards to farm workers in the operation of Trialgro's farm. For each hazard explain how the risks to personnel could be minimised.

(9)

Hazard 1

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Hazard 2

Hazard 3

(Total for Question 2 = 12 marks)



3 Trialgro had three accidents in the last two years, two of them involving minor tractor collisions. In the third case, a tractor ran over a section manager's foot. Following the accident, the company's health and safety policy ensured that the full details were written into an accident book. The Safety Officer (SO) reviewed training for tractor drivers and ensured that they fully understood the provisions of the health and safety legislation. The SO put up more safety notices reminding farm pedestrians of their responsibilities.

(a) Evaluate the possible impacts these accidents might have on the farm's operation.

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(b) With reference to specific legislation, explain how Trialgro's actions are following legislation to minimise the risk of future accidents.

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(Total for Question 3 = 14 marks)

TOTAL FOR PAPER = 50 MARKS



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