# 7.5 Global Food Security: Supply, Insecurity and Increasing Production: 30-minute Pack

AQA 8035 · Calculators not allowed · about 30 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

**Answer ALL questions. Show all your working.**

**1** Define the term food insecurity in a global context.

**(Total for Question 1 is 1 mark)**

**2** Give one human factor that can reduce food supply in an area.

**(Total for Question 2 is 1 mark)**

**3** Explain the causes of global food insecurity.

**(Total for Question 3 is 12 marks)**


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**4** Give two examples of technological strategies that can increase food production without naming a specific project.

**(Total for Question 4 is 2 marks)**

**5** Explain TWO ways in which pests and crop disease can reduce food supply. Each way should include a linked effect.

**(Total for Question 5 is 6 marks)**


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# Mark scheme · 7.5 Global Food Security: Supply, Insecurity and Increasing Production: 30-minute Pack

## Question 1

when people do not have reliable access to enough affordable, safe or nutritious food to meet dietary needs and lead a healthy life, oe — **B1**

**Answer: When people do not have reliable access to enough affordable, safe or nutritious food to meet dietary needs and lead a healthy life.**

## Question 2

for example, conflict disrupting food production and distribution, oe — **B1**

**Answer: Conflict disrupting food production and distribution.**

## Question 3

**Level 3** Detailed and well exemplified explanation that integrates a range of physical and human causes, shows how they interact to produce food insecurity, and refers to global patterning between HICs, NEEs and LICs. — **7-9**

**Level 2** Clear explanation of several causes, with explanation of impacts and some links between causes, but less detailed exemplification or limited reference to global patterns. — **4-6**

**Level 1** Basic statements of causes with limited explanation and little or no linkage between causes. — **1-3**

**Indicative content:**

- Physical causes: climate variability and extreme weather such as drought or floods reduce crop yields; variable soil quality and pests or crop diseases lower productivity.
- Water-related limits: unreliable rainfall and water stress reduce irrigation potential and crop reliability in some regions, contributing to lower production in LICs and some NEEs.
- Human causes: conflict disrupts farming, labour and supply chains, often leading to immediate shortages and long term abandonment of productive land.
- Economic causes: poverty limits farmers access to inputs such as fertiliser, quality seed, machinery and finance, preventing yield improvements and market participation.
- Market and trade causes: dependence on food imports or volatile global commodity prices can make food unaffordable when prices spike, especially in import-dependent LICs.
- Population and demand: rapid population growth and dietary shifts in NEEs increase demand faster than supply can adjust, putting pressure on global availability and local access.
- Infrastructure and governance: poor transport, storage and market infrastructure cause post-harvest losses and unequal distribution; weak governance and lack of safety nets increase vulnerability.
- Interactions and patterns: many LICs face combinations of physical vulnerability and poverty, explaining global patterns of low calorie intake and high undernourishment compared with HICs; NEEs show mixed outcomes depending on investment and technology adoption.
- Strategies and limitations: technological solutions such as irrigation, biotechnology, hydroponics and appropriate technology can raise production, but they require investment, training and often reliable water or energy, so they may not immediately solve insecurity where poverty or conflict persist.
- A high-quality answer will link causes together, for example showing how climate shocks amplify poverty and market failure, and conclude with an overall judgement on the relative importance of the listed causes in producing global food insecurity.

## Question 4

for example, hydroponics or aeroponics, oe — **B1**

for example, genetically modified crops designed for higher yields or pest resistance, oe — **B1**

**Answer: Hydroponics or aeroponics; genetically modified crops designed for higher yields or pest resistance.**


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## Question 5

| | |
|---|---|
| way 1 identified, e.g. pests eat crops or stored grain, reducing harvestable food, oe | **B1** |
| linked detail for way 1, e.g. loss of crop reduces farmers income and decreases market supply, leading to higher prices and increased food insecurity, oe | **B1** |
| way 2 identified, e.g. crop disease reduces plant health and yields, oe | **B1** |
| linked detail for way 2, e.g. disease can spread quickly and destroy large areas of crops, requiring replanting or imports, which delays supply and raises costs, oe | **B1** |
| additional valid linked effect, e.g. reduced yields can force farmers to use more chemical controls or abandon land, harming long term productivity, oe | **B1** |
| additional valid linked effect showing wider impact, e.g. reductions in supply increase vulnerability for poorer households who cannot afford price rises, oe | **B1** |

**Answer: Pests eat crops or stored grain, directly reducing harvest and farmers income; this lowers market supply, pushes prices up and increases food insecurity for poorer households. Crop diseases reduce plant health and yields and can spread rapidly across fields, destroying large areas and forcing replanting or imports, which delays supply and raises costs, worsening access to food.**


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