

Food supply: practice questions

6 questions • 20 marks • mark scheme at the back

For Cambridge IGCSE Biology 0610 (and 0970, which has the same content). **Supplement** is Extended content, only examined on Papers 2 and 4.

Name

Total / 20

1 Which chemical is used to reduce competition from weeds? [1 mark]

- A. ☐ Insecticide
- B. ☐ Herbicide
- C. ☐ Fertiliser
- D. ☐ Antibiotic

2 Describe how fertilisers, insecticides and agricultural machinery have each helped to increase food production. [3 marks]

3 Dairy farmers use selective breeding to increase the volume of milk produced by cows. [4 marks]
Describe how a farmer could use selective breeding to produce cows that give more milk.

- 4** A farmer grows only wheat on a very large field every year. (a) State the term for this type of farming. [1] (b) Give one advantage and two disadvantages of this type of farming. [3] **[4 marks]**

- 5** Describe one advantage and two disadvantages of intensive livestock production. **[3 marks]**

- 6** Explain why a farmer growing a monoculture might use insecticides, herbicides and chemical fertilisers, and suggest one problem that these chemicals could cause. **[5 marks]**

Mark scheme

One mark for each point unless a maximum is given. Words in brackets are not needed for the mark.

1. [1]

B B (1)

2. [3]

- fertilisers provide mineral ions / nitrates so plants grow better / higher yield (1)
- insecticides kill insect pests so less damage to crops / improve quality and yield (1)
- machinery allows larger areas of land to be farmed / improves efficiency (1)

3. [4]

- select cows that produce the most milk (1) allow bulls whose mothers / daughters gave the most milk
- breed them together (1)
- select the offspring that give most milk (1)
- and breed from these; repeat over many generations (1)

4. [4]

- (a) monoculture (1)
- (b) advantage: machinery can be used efficiently / large amount of food produced / lower cost (1)
- disadvantage: pests / disease spread quickly through crop (1)
- disadvantage: low biodiversity / lots of fertiliser needed / pollution by chemicals (1)
- allow any suitable pairs; the two disadvantages must be different

5. [3]

- advantage: more food from a small area of land / lower cost / quick growth (1)
- disadvantage: animal welfare / stress / little space (1)
- disadvantage: disease spreads easily / waste pollutes water / antibiotics overused (1)

6. [5]

- pests spread easily / eat large amounts of one crop (1)
- insecticides kill insects so yield / quality improved (1)
- herbicides kill weeds so less competition for light / water / ions (1)
- same crop removes the same ions from soil each year so fertiliser replaces them (1)
- problem: run-off into rivers causes pollution / eutrophication / harms other organisms (1)