

5.10 Consequences of Agricultural Practices

Name: _____ Class: _____ Date: _____ **Total: 10 marks**

KEY WORDS desertification 荒漠化 • deforestation 森林砍伐 • pollution 污染
• soil degradation 土壤退化 • agriculture 农业

Objective

Build the skills to answer exam questions on the **environmental consequences of agriculture** 农业的环境影响.

You must be able to:

- explain how farming causes **soil degradation** 土壤退化 and erosion
- explain how fertilizers cause water **pollution** 污染
- link agriculture to **deforestation** 森林砍伐 and land-cover change
- state one way to farm more sustainably

1 Worked examples

Study these first. Each one shows the method for a task used later.

■ Soil and water impacts

Intensive farming can strip nutrients and cause **soil degradation** and erosion. Excess fertilizer washes into rivers, causing **pollution** and algal blooms.

■ Land-cover change

Clearing land for farms drives **deforestation** and loss of habitat, changing land cover and releasing carbon.

■ Sustainable responses

Crop rotation, terracing, cover crops, and reduced chemical use protect soil and water while keeping land productive.

2 Practice

2.1 Explain how excess fertilizer harms rivers. [2]

2.2 State how expanding farmland causes deforestation. [2]

2.3 A region's overworked fields are losing topsoil.

(a) Name this environmental consequence. [1]

(b) State one practice that would reduce it. [1]

3 Exam-style questions

3.1 Fertilizer runoff causing algal blooms in a lake is an example of [1]

- **A** soil erosion
- **B** water pollution
- **C** deforestation
- **D** desertification only

3.2 Clearing rainforest for cattle pasture is a form of [1]

- **A** reforestation
- **B** deforestation and land-cover change
- **C** crop rotation
- **D** fair trade

3.3 A farm switches to crop rotation and cover crops.

(a) State one environmental benefit.

[1]

(b) Explain why this is more sustainable.

[1]

Solutions

2.1 fertilizer washes into waterways; it causes algal blooms/pollution that harm aquatic life.

2.2 forests are cleared to create fields/pasture; this destroys habitat and changes land cover.

2.3 (a) soil degradation/erosion. (b) crop rotation, terracing, cover crops, or reduced tillage.

3.1 B. nutrient runoff into water = water pollution.

3.2 B. removing forest for farming = deforestation/land-cover change.

3.3 (a) less soil erosion / restored soil nutrients / less chemical need. (b) it keeps the land productive long-term without degrading it.