

Exercise walk-through

5.10

Consequences of Agricultural Practices

AP Human Geography

Environmental effects: explain the pathway

Change	Possible mechanism
Fertiliser runoff	Nutrients enter water, encourage algal growth and can contribute to oxygen depletion.
Irrigation without drainage	Evaporation can leave salts in soil and reduce productivity.
desertification	Dryland degradation can involve land pressure and climatic conditions; not every dry place is degraded.
Land-cover change	Deforestation and wetland drainage can reduce habitat and change water flows; assess the place and practice.

Land management: benefits with conditions

Practice	Mechanism and limit
Terracing	Can reduce downslope runoff and erosion; needs suitable design and maintenance.
Conservation tillage	Can retain cover and reduce erosion; effects depend on soil and management.
Shifting cultivation	Adequate fallow can support recovery; shortened fallow may increase pressure.
Suburban expansion	Can remove farmland near markets. Do not assume every affected parcel was the most productive.

Food security: four connected dimensions

Dimension	Question
Availability	Is enough food supplied?
Access	Can people obtain suitable food physically and economically?
Utilisation	Do safe food, health and care allow adequate nutrition?
Stability	Are these conditions maintained over time?
food security	is not measured by harvest size alone.

Full warehouses, hungry households: attempt

Original scenario

A district has full grain warehouses. Low-income households cannot afford safe, nutritious food and have costly transport to shops.

Identify the problem that increased national production alone may fail to solve. Suggest an intervention and explain the mechanism.

Food access: worked reasoning

The scenario gives evidence of an access problem: food exists, but affordability and transport constrain households' ability to obtain it.

Income support or affordable distribution could improve access through purchasing power or lower travel costs. Assess whether the intervention reaches affected households.

A food desert concerns limited access to suitable food outlets in context; location, affordability and transport all matter.

Exercises 2.1-2.2

2.1 Explain how excess fertilizer harms rivers.

[2]

2.2 State how expanding farmland causes deforestation.

[2]

Exercises 2.1-2.2

2.1 Explain how excess fertilizer harms rivers. [2]

2.1

- fertilizer washes into waterways; it causes algal blooms/pollution that harm aquatic life
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2.2 State how expanding farmland causes deforestation. [2]

2.2

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

Exercise 2.3 (a)

2.3 A region's overworked fields are losing topsoil.

(a) Name this environmental consequence.

[1]

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(a) Name this environmental consequence.

[1]

(a)

- soil degradation/erosion

Exercise 2.3 (b)

2.3 A region's overworked fields are losing topsoil.

(b) State one practice that would reduce it.

[1]

Exercise 2.3 (b)

2.3 A region's overworked fields are losing topsoil.

(b) State one practice that would reduce it.

[1]

(b)

- crop rotation, terracing, cover crops, or reduced tillage

Exercises 3.1-3.2

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

Exercises 3.1-3.2

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

[1]

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A soil erosion

B water pollution

C deforestation

D desertification only

3.1 B

- nutrient runoff into water = water pollution

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

3.2 B

- removing forest for farming = deforestation/land-cover change

Exercise 3.3 (a)

3.3 A farm switches to crop rotation and cover crops.

(a) State one environmental benefit.

[1]

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(a) State one environmental benefit.

[1]

(a)

- less soil erosion / restored soil nutrients / less chemical need

Exercise 3.3 (b)

3.3 A farm switches to crop rotation and cover crops.

(b) Explain why this is more sustainable.

[1]

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[1]

(b)

- it keeps the land productive long-term without degrading it