

Name: _____

Date: _____

Class: _____

IB ESS

5.2 Terrestrial Food Production Systems and Food Choices

Significant ideas:

The sustainability of terrestrial food production systems is influenced by socio-political, economic and ecological factors.

Consumers have a role to play through their support of different terrestrial food production systems.

The supply of food is inequitably available and land suitable for food production is unevenly distributed, and this can lead to conflict and concerns.



Sustainability of Terrestrial Food Production Systems

1. Outline subsistence and commercial farming.

2. Complete the table to compare subsistence and commercial farming:

	Commercial	Subsistence
Size/scale	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>
Use in MEDC vs LEDC	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>
Level of mechanization	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>
Legal regulation	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>



3. Compare the sustainability of commercial and subsistence farming systems.

Energy

Which is more sustainable? (tick)

Commercial Subsistence

Explanation:

Irrigation

Which is more sustainable? (tick)

Commercial Subsistence

Explanation:

Indigenous crops/livestock

Which is more sustainable? (tick)

Commercial Subsistence

Explanation:

Fertilisers and pesticides

Which is more sustainable? (tick)

Commercial Subsistence

Explanation:



Antibiotics

Which is more sustainable? (tick)

Commercial Subsistence

Explanation:

Pollinators

Which is more sustainable? (tick)

Commercial Subsistence

Explanation:



4. Outline how the following methods could be used to increase the sustainability of food production systems:

Altering human activities

Improving food labels

Government control and monitoring

Creating buffer zones



Food Distribution and Choices

1. Explain what is meant by malnutrition.

2. According to researchers, there is enough food produced to feed everybody on the planet, yet many people in the world still live in food poverty. Using the headings below, explain why food distribution is not equal:

Climate

Land suitability

Cash cropping in LEDCs

Food waste in food production systems

3. Compare reasons for food waste in LEDCs and MEDCs.



4. People and societies make choices about the food they eat, and this is not always limited to what the land can produce. Outline how the following factors influence the food choices of people and societies:

Cultural and religious beliefs

Politics and legislation

Socio-economic factors

5.

a) Outline the ways in which population growth in society will decrease the availability of land for food production.

EXTENSION:

b) Outline how population growth could **increase** food production.

(Hint: consider the technocentric/cornucopian environmental value system)



Food Yield, Trophic Levels and Societies

1. Explain why producing food from livestock is generally less efficient than producing food from crops on the same land.

2. Explain why harvesting food from lower trophic levels may be more **cost** efficient.

3. Outline reasons why members of a society may tend to harvest from higher trophic levels despite the limitations in efficiency.



Comparing Food Production Systems

1. Conduct your own research into two specific terrestrial food production systems, preferably one that is present in your own country and one that isn't, if possible.

Compare these food production systems using the table below.

	Food production system 1:	Food production system 2:
	<hr/>	<hr/>
Inputs	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>
Outputs	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>
System characteristics (e.g. diversity, sustainability)	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>
Environmental Impact	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>
Socio-economic details (e.g. subsistence or cash crop, for export or local use...)	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>

