7.5 FOOD PRODUCTION (biology only)

Biotechnology and food production

- Allows efficient food production through microorganisms
  - *Fusarium* produces mycoprotein
- Genetic engineering/ modification
  - Bacteria can be modified to produce insulin for diabetes
  - Higher yield and less wastage of produce

Sustainable fisheries

- Prevents extinction of fish species
- Introduce fishing quotas
- Control net size
- Ensures fish populations do not decline

Factors affecting food security

- Natural disasters and climate change
- Increasing birth rate, decreasing death rate
- High cost of agricultural inputs
- Changing diets – increasing demand for meat in developing countries
- Pests and disease
- War and conflict

Farming techniques

- Use of pesticides, herbicides and fertilisers
- High food demands mean that efficiency and yield must be maximised
- Limit energy loss: restrict movement, keep at optimum temperature, minimise disease
- Selective breeding and genetic modification

AQA

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