

# OCR (A) Biology GCSE

## B6.2 - Feeding the human race

### Flashcards

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Give 5 factors that affect food security



## Give 5 factors that affect food security

- The human population size
- The number of pests and pathogens
- Global warming and climate change
- Wealthier parts of the population requiring a larger variety of food
- The high cost of farming methods



# What is hydroponics?



# What is hydroponics?

## Growing plants in nutrient mediums other than soil



# What is biological control?



# What is biological control?

Controlling pests by deliberately introducing natural predators of the pest



# How can gene technology help agriculture?





# How can gene technology help agriculture?

Beneficial genes for pest resistance or the ability to grow in harsher conditions could be introduced



# How can fertilisers and pesticides help agriculture?



# How can fertilisers and pesticides help agriculture?

- Pesticides kill pests that could harm the growth of the plant
- Fertilisers provide the plant with all the nutrients it needs so that it can grow more quickly



Describe how selective breeding is carried out



## Describe how selective breeding is carried out

- Animals with the desired traits are chosen
- These animals are bred together
- Repeat the process until the offspring have the desired traits



# What is genetic engineering?



# What is genetic engineering?

## Altering the genome of an organism



How are new genes introduced into an organism? (Higher)





# How are new genes introduced into an organism?

## (Higher)

- The organisms genes are cut using restriction enzymes to create sticky ends
- The DNA from a bacterium is also cut to produce sticky ends
- The gene is inserted into the bacteria along with an antibiotic resistance gene
- Antibiotics are used to remove the bacteria that do not have the new genes



# What is a transgenic organism?



# What is a transgenic organism?

An organism that contains foreign DNA



Give 2 advantages of genetically modified crops



Give 2 advantages of genetically modified crops

- Better crop yields
- Food will last longer and taste better



Give 2 disadvantages of genetically modified crops



Give 2 disadvantages of genetically modified crops

- The new genes can easily spread to other plants in the environment
- We don't know what long term effects GM crops cause on health

