

Selective breeding and tissue culture

What is selective breeding?

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Give two characteristics selected for in food plants.

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Give two characteristics selected for in domesticated animals.

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What is a disadvantage of selective breeding?

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Two Rr plants are crossed (R dominant). What is the probability of an rr offspring?

Selective breeding and tissue culture **Triple only**

What is tissue culture?

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What conditions does tissue culture need?

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Advantage of tissue culture in plant breeding programmes?

Any two of: disease resistance, larger fruit or grains, better taste, higher yield.

Humans choosing parents with desired characteristics to breed together, repeated over many generations.

It reduces genetic variation, so the population is at greater risk from disease; inbreeding can cause health problems.

Any two of: more milk, more meat, more eggs, a gentle nature.

Growing new cells or plants from small pieces of tissue on a sterile nutrient medium.

1/4 or 25%.

Many genetically identical plants can be produced quickly from a small amount of tissue.

Aseptic technique to prevent contamination, and a nutrient medium (agar) with nutrients and growth hormones.

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Advantage of tissue culture in medical research?

Large numbers of identical cells can be grown to test drugs and study diseases.