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Natural selection and

selective breeding

Natural selection explains how evolution occurs. Different varieties of plants and animals with desired characteristics can be developed by selective breeding.

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Selective breeding

Selective breeding is the traditional method for improving crops and livestock, such as increasing disease resistance or milk yield.

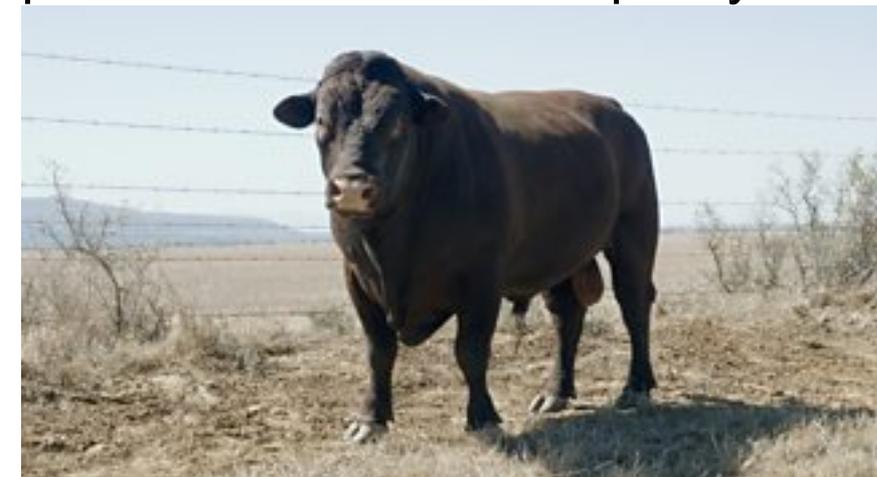
New varieties

[Natural selection](#) and [selective breeding](#) can both cause changes in animals and plants. The difference between the two is that natural selection happens naturally, but selective breeding only occurs when humans intervene. For this reason selective breeding is sometimes called artificial selection.

Different varieties of plants and animals with desired characteristics can be developed by selective breeding. For example:

cows that produce lots of milk
chickens that produce large eggs
wheat plants that produce lots of grain

The new varieties may be economically important. For example, they may provide more or better quality food to feed people.





Example of selective breeding

The Aberdeen Angus bull is bred for beef

Main steps involved

Selective breeding takes place over many generations. These are the main steps involved:

- decide which characteristics are important enough to select
- choose parents that show these characteristics
- choose the best offspring from parents to produce the next generation
- repeat the process continuously





All these breeds of dog are the results of selective breeding from a common ancestor

Problems with selective breeding

Future generations of selectively bred plants and animals will all share very similar [genes](#). This could make some diseases more dangerous as all the organisms would be affected. Also, there is an increased risk of genetic disease caused by [recessive alleles](#).

All the genes and their different [alleles](#) within a population is its gene pool. Inbreeding can lead to the loss of alleles from the gene pool, making it more difficult to produce new varieties in the future.

Glossary

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