

Home School with Charnwood Museum

The Science of Farming

Did you know that there was an 'Agrarian Revolution' in this country in the 18th Century? This is where farming methods and processes changed because of new discoveries or inventions.

A famous contributor to this was born and lived right here in Charnwood! Robert Bakewell was a local farmer who lived at Dishley Grange, just outside Loughborough. He is seen as a pioneer of selective breeding, especially livestock.

Find out all about him and selective breeding in this fact sheet and then test your knowledge with our question sheet

What is Selective Breeding?

Selective breeding is the process of breeding animals with certain features to result in offspring that display those features. Sounds complicated doesn't it!

In farming, selective breeding is used in a variety of different areas – crops, animals for meat, working cattle and the process is always being improved. The aim is to always get the best possible outcome, for example crops are that are resistant to a particular disease, animals that produce the most meat or the strongest animals if needed for pulling farm machinery.

Robert Bakewell was one of the very first farmers to do this on a large scale and have a lot of success with it

Who was Robert Bakewell?

Robert Bakewell was born in 1725 to a family of tenant farmers who worked the land at Dishley Grange near Loughborough. Dishley is part of the Garendon estate and the Bakewell family had farmed the 450 acres of land there since 1709, when Robert's grandfather took on the farm. Robert was very active in the management of the farm with his father and was able to go on several tours around the country studying farming methods and looking at different breeds of livestock. It is believed that this inspired his work to improve his cattle at Dishley.



One of the biggest developments Bakewell made was his method of 'in and in' breeding. Usually animals of both sexes would be kept in fields together and breed randomly. Bakewell decided to separate males from females and would only allow mating to take place deliberately and between specific animals.

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What this led to was Bakewell being able to choose animals with features he thought were the best and breed them to get more animals with those features.

One example was his Longhorn cattle, he noticed that they were very efficient meat producers – they put on a lot of weight but did not eat lots of feed. They were also good for milk and cheese production and had been used to pull ploughs. He decided to breed one of his longhorn cattle with a Westmorland bull and created the Dishley longhorn, which was large and meaty.



He would also send his cattle to other farms so that they could breed with his 'improved' bull.

He also did something similar with sheep and selectively bred them to result in the Leicester Longwool sheep. This animal was a good meat producer but also good for wool, which was used in the local textile industry. The Leicester Longwool was also exported around the world because of these enhanced characteristics.

Farming was not an easy business, and as well as selective breeding livestock Bakewell also investigated new methods of using water for both irrigation but also transport. He diverted local streams and rivers to flood farmland and built canals to move crops across the land.

Robert Bakewell died in 1795, and his methods of selective breeding have become accepted practice today. And some of his work was mentioned by Charles Darwin in his work 'On the Origin of Species'

Key words

Pioneer— 'A person who is one of the first to do something'

Selective breeding— 'the process of choosing plants and animals with desirable features to reproduce'

Livestock— 'animals that are kept on a farm'

Irrigation— 'the practice of supplying land with water so that crops will grow'

If there are other words that you are unsure of, why not find out their meaning by using a dictionary?

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Now see how you get on with the following questions

1. Where was Robert Bakewell's farm?
2. What can selective breeding be used for? Do you think that selective breeding is good or bad? Explain your thinking.
3. Name some features that might be chosen for selective breeding? Why are these important?
4. What type of cattle did Robert Bakewell have a lot of success breeding? What made them good cattle?
5. Name two features of the Leicester Longwool sheep that made them popular around the world
6. What did Robert Bakewell use to transport crops around his farm?
7. Can you list some other animals that can be found on a farm that might be selectively bred to improve their features and why not draw some of your 'improved' animals below. *For example, a horse may be bred to be powerful and strong if pulling a plough*