



Abstract

The desirable characteristics of the Longhorn cattle at Duggleby High Barns Farm are maintained through artificial selection of the 'herd bull' while the lifestyle and treatment of the 'steer' is responsible for the quality of its beef. We discuss the practical issues of maintaining a healthy herd while selecting for high beef yield.

A full day's fieldwork can include all the areas below or strands can be selected for a shorter study.

Aims

- To investigate the effect of different farming practices on crop productivity
- To discuss selective breeding of the English Longhorn
- To investigate the effect of farming on a freshwater ecosystem
- To investigate how the invertebrate community in 3 wildlife habitats affect pest populations, and discuss the possible effects of climate change on future pest populations

Learning Objectives:

- To grasp the impacts of agriculture on UK biodiversity, its landscape, and the nation's food
- To become familiar with the usage and meaning of the common farming terms
- To compare the productivity of crops grown under different farming practices
- To understand the ways in which beef productivity is affected by farming practices
- To relate the path of the Nitrogen cycle to the rural landscape
- To establish how the health of a freshwater stream changes as it flows through farmland from its source
- To identify those wildlife habitats that support beneficial invertebrates that control pest populations
- To appreciate the importance of wildlife corridors such as hedgerows and margins in mitigating the effects of climate change on ecosystem stability

Learning Outcomes:

- To recognise the hazards associated with farming fieldwork and explain how to minimise their likelihood of occurrence
- To assess the merits of different farming practices on the productivity of an arable crop
- To evaluate the use of percentage cover as a measure of plant abundance
- To apply knowledge of the desirable heritable characteristics of Longhorn cattle in a selective breeding scenario
- To evaluate extensive and intensive animal husbandry practices
- To annotate fieldwork results to a sketch of the Nitrogen cycle
- To evaluate the use of freshwater invertebrates as biological indicators of the health of a stream
- To relate the abiotic conditions of a freshwater stream to the environmental issues arising from the use of fertilisers surrounding farmland
- To evaluate the farming practices used to control pests on crops
- Where appropriate, to explain unpredicted trends in the data
- To evaluate the limitations in equipment and methods used in data collection