

Using Calan gates to measure feed intake

Measuring intake of animals on different diets is key to understanding related performance and nutrient use efficiency. Sometimes we want to be able to find out how much of a particular feed they will choose to eat (their voluntary intake), and sometimes we want to control their intake so we can be sure they will eat everything in a mixed diet. This type of trial is often done by housing animals in individual pens, but their behaviour changes if they are no longer part of a group. At the same time, grouping animals together generally makes it impossible to know what individuals in the group ate.



The Calan Broadbent Feeding System, known to many researchers as the Calan gates system, allows researchers to prescribe, control and document the feed intake of each animal in a common trial pen. Crucially this can be done without restricting animals. Trials using this type of equipment require fewer animals, less space, less penning, less feed, and less work. The system consists of a series of electronically controlled doors. Each door accommodates only one animal, and each animal is equipped with an electronic

key that will interact with only one designated door. The system is capable of handling any type of feed material from concentrate to forage rations.

While Calan gate systems for cattle can be found at research organisations around the globe, and have been fundamental to hundreds of research projects, the company have only manufactured a handful of sheep systems. The one installed at Pwllpeiran is the only Calan gates system for sheep in the UK.

We are using this facility for a range of experiments. The set-up is ideal for growth studies since animals can be housed in a group as they would be on farm, but different diets can be fed and individual weight gains linked to the amount of feed or forage consumed by each animal.



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