Research Project

Despite Scotland having a temperate climate, given the relatively high humidity, factors such as radiant heat, metabolic activity, stocking rate, recumbency times, and selection for high milk yields can lead to heat stress in dairy cattle in Scotland.

Moreover, photoperiod is known to have a dynamic effect on physiological state in all animals. Due to its latitude, Scottish dairy cattle are subjected to large seasonal changes in natural photoperiod.

The project is aiming to evaluate the effect of temperature, humidity, light levels and air pollution on production output and disease incidence in dairy cows in Scotland. Three distinct aims can be summarised as:

1. To determine if environmental parameters are associated with production output and disease incidence in dairy cows in Scotland.

2. To determine if environmental parameters are associated with welfare in dairy cows in Scotland.

3. To develop recommended management strategies for use in Scottish dairy farms to maximise production and welfare relative to a range of environmental conditions.