

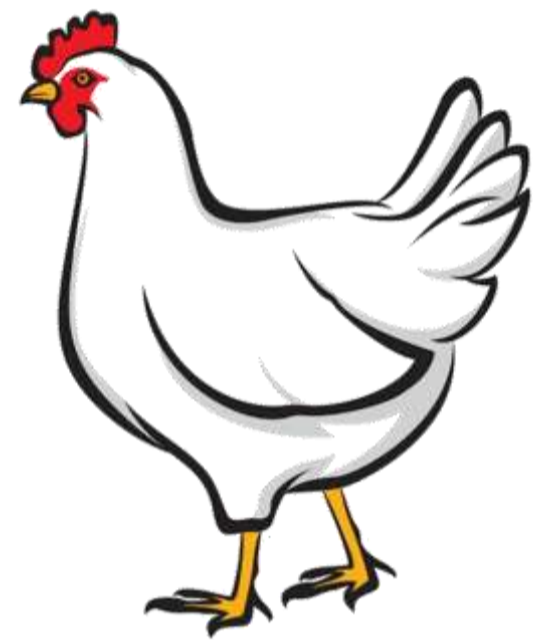
Reducing ammonia emissions from broiler chicken production

Background

The growing demand for chicken has provided viable diversification opportunities for a number of Welsh farmers. An inevitable consequence of any form of poultry farming is the production of ammonia, through the natural breakdown of urates within poultry manure. Ammonia emissions from poultry production can have a number of significant impacts on the environment, bird welfare, and broiler economics.

High levels of ammonia emissions are one of the main reasons for permits being refused, or for planned expansion being prohibited. Modern housing with better ventilation and heating along with improved litter has reduced ammonia emissions, however further improvements may be possible by using additives.

The use of ammonia-reducing additives, either applied directly to the litter or supplied to the birds via the drinking water, offers an additional means of further reducing ammonia production.



Two established commercial broiler producers, with modern buildings and many years' experience of producing poultry for the UK market, are involved in this one year project investigating how additives can reduce their ammonia emissions.

Project plan

Three different commercially available ammonia reducing additives will be tested. Each of the three additives will be used for one production cycle (2 months) on each farm

The following variables will be monitored and recorded for each treatment:

1. Ammonia levels within the houses
2. In house temperature
3. Foot pad condition, hock and gait scoring
4. Feather condition
5. Litter condition
6. Mean bird liveweight
7. Flock mortality
8. Feed intake

The potential improvements in animal health/performance and reduction in ammonia emissions provided by additives are much talked about, and this project will help farmers assess whether they are a useful tool for them to employ in reducing ammonia levels on farm.

