

# **The 4 E's of farm animal research: Economics, Education, Encouragement and Enforcement**

**David C.J. Main**

**Department of Clinical Veterinary Science, University of Bristol, England**

Promoting a culture of continuous improvement rather than adherence with minimum standards in welfare is an important mechanism for improving farm animal welfare. This can be a difficult challenge on many units so it is important to consider the economic, education, encouragement and enforcement drivers that may promote this approach. Using dairy cattle lameness as an example the potential mechanisms to use these drivers is reviewed. The route most likely to drive change is to focus on encouraging the active participation of those caring for stock in monitoring and managing outcome measures. Economic and educational approaches have a significant but less important role in supporting change. For example, where possible, economic drivers need to be working in the same direction as welfare (i.e. provide win-win situations). Educational initiatives, such as providing generic technical information and farm specific advisory support, need to be available when requested but they are likely to be ineffective as the primary route of promoting behaviour change. Finally, enforcement tools, based on existing non-compliance procedures, should only be used to stimulate activity where other initiatives prove ineffective on individual units.