CATTLE HEALTH AND WELFARE – FILLING THE KNOWLEDGE GAPS

EVERY TWO YEARS THE GB CATTLE HEALTH & WELFARE GROUP (www.chawg.org.uk) publishes a state of the nation report from a wide range of sources. This is the third report and the benefit of identifying more organisations and groups that have collected data is coming to the fore.

The group combines the expertise of over 20 member organisations and is funded by AHDB Dairy and AHDB Beef & Lamb. The chief veterinary officers for the UK, Wales and Scotland have welcomed the report and made some interesting observations:

- The UK Government has placed antimicrobial resistance at the top of its risk register alongside terrorism and pandemic flu.
- An emphasis on sound animal husbandry and healthy animals kept to high welfare standards will help minimise routine reliance on antimicrobials.
- The healthier our animals, the more attractive our products.
- The better our animal welfare, the greater the confidence of consumers in our production systems.

As mobile technology has developed to make data-gathering less time-consuming, veterinary practices are engaging to fulfill “knowledge gaps”. Although the data collected relate to specific projects and initiatives in local areas, they all contribute to an improvement in awareness.

Joining up the parts of the jigsaw is one of the roles for the CHAWG. As well as encouraging and coordinating cattle health and welfare improvement programmes, prioritising research, disseminating knowledge and liaising with stakeholders, the group is charged with providing guidance and to be a resource for the Chief Veterinary Officers across GB and other relevant government bodies, including the early stages of policy development.

One bioscure unit

So this is not a document to be left on the shelf. Tim Brigstocke, chairman, recognises the value of considering England, Wales and Scotland as one bioscure unit and that the challenges are real and positive developments are being shown to be effective. However, there is much work to be undertaken and understanding to be gained.

Within the section titled “trends and demographic changes” the total cattle population in GB is recorded as 8.2 million animals (compared to nine million a decade earlier) with around the same number of premises (109,000). The three countries are listed separately with a breakdown of beef, dairy and dual premises.

Total milk production from the UK national herd is 14.6 billion litres, with a yield of 7,870 litres/cow/annum and an average herd size of 142 dairy cows. The production of pig meat shows a steady increase over the last five years to 900,000 tonnes with beef and veal showing small annual variations at 825,000 tonnes and sheep meat being stable at 300,000. Total GB imports of cattle are 49,000 head, a fall from a peak of 59,000 in 2013. Approximately three-quarters of the dairy breed registered births are Holstein with a spread of breeds in the beef sector (Limousin @30%).

Data exchange portal

A single portal for the exchange of industry data is being developed. Known as the Livestock Industry Data Exchange Hub (LIDEH), the initial focus is on cattle disease. The system will be available at key transaction points in the supply chain to “underpin” risk-based trading of cattle in the UK for bovine viral diarrhoea (BVD), Johne’s Disease (JD) and bovine tuberculosis (bTB).

More than 20 industry collaborators are involved and the results of a feasibility study are due soon. By creating industry-agreed data exchange protocols, it is intended that the transfer of information can be standardised and expanded to other areas of data collection that will benefit the wider industry.

The impacts of endemic disease at farm level are recognised to include reduced productivity, early death, inhibited growth rates and increased culling. To these can be added the impact on greenhouse gas emissions. Ten diseases have been assessed for greenhouse gas production and John’s Disease increases emission by 25%. Salmonella, BVD and infertility have significantly raised levels.

A study by ADAS has indicated the effect of treating each disease (mitigation measures) and the greatest reduction is with BVD. This allows for emissions due to implementing disease control including veterinary surgeon travel, medicines and building construction. All treatments are effective in reducing emissions apart from calf pneumonia and calf diarrhoea that have very low emissions initially.

The table in the report indicates emissions from milk production, but further study would be needed to appreciate how the figures were calculated. It seems likely that discussions with farmers over the need for disease control may now include greenhouse gas production from herds.

Two commercial dairy herd costing services both indicate that the highest reason for health-related culling in dairy herds is fertility at 29% (not in calf, not seen bulling, not within the required calving pattern). The next highest is mastitis and high cell count at 14%, with lameness at 10%. Depending on the herds being assessed, there are considerable differences in the numbers culled for John’s Disease and as TB reactors. The top 25% of herds achieve a culling rate of 20% with an age at exit of seven years (4.2 lactations) and a 305-day yield of 8,813kg.

A two-country study project investigated post-mortem findings in beef herds and found that the most common diagnosis for fallen stock in suckler herds was John’s Disease. It is proposed that replacements for suckler herds are of dairy origin and there is considerable risk in buying in disease.

Pneumonia and lung conditions cause an equally high number of deaths (10%) with wire at 3%. This contrasts wildly with dairy cows where wire at 18% is the most common cause of death. It may be that the experience of veterinary surgeons in preventing wire deaths in dairy herds needs to be highlighted. Toxic mastitis at 8.5% is the next highest cause recorded.

Farm assurance

The section on “farm assurance” gives a realistic overview of the various schemes and initiatives. Red Tractor is the predominant scheme, but individual supply chains are setting up their own monitoring and improvement programmes. The standards for Red Tractor are due for review.

Within the dairy sector an annual veterinary review of health and performance records includes a review of medicine and antibiotic use. It is recommended that producers body condition score their herds. With beef assurance, a vet must visit the farm at least once a year to look over livestock and review medicine and antibiotic use, in order for prescription medicines to be used. Records of all medicines administered are to be kept for five years. A study by NMR/VEERU of the 6.5 million annual milk samples tested for somatic cell count (SCC) show that 79.7% of samples are below 200,000 cells per ml. This figure has increased steadily over the past few years.

The data show that the percentage of herds keeping high levels of chronic cows has dropped dramatically in recent years, reducing the reservoir of infection and hence the herd SCC. The national average cell count is 189,000.

Veterinary surgeon and farmer training as part of the Dairy Mastitis Control Plan commenced in 2009 and 140 active plan deliverers, mainly vets, are now participating. An initial review of herds following the recommended management changes have shown a decrease in cell count and a reduction in the incidence of clinical mastitis.

Wide variation in mobility

Lameness prevalence in dairy cattle shows a wide variation. Individual herds can vary from zero to over 50%. Considerable effort is taking place to record herd mobility and to identify lesions involved with the high mobility scores indicating lameness.

Foot trimmers and veterinary practices are sharing awareness and with the use of computers on-farm, the details of herd conditions are being collected and will lead to more accurate treatment. Initial findings are that over 80% of lesions are in the hind feet with sole ulcer (including bruising) the most common finding on many farms.

The Healthy Feet programme has 157 trained Mobility Mentors. Early and effective treatment of claw horn lesions with non-steroidal anti-inflammatory drugs and correcting the inadequacies of current hoof trimming are forward developments.

Part of the Responsible Use of Medicines initiative is to extract prescription and dispensing data from veterinary practices. Over the next few months, practices can expect to become engaged in effective ways to collect and record medicine data for use by the industry to guide improvements. More detail is contained within the CHAWG report, but the whole issue of AMR is a driving force for change.