



Image: Inside a Moredun laboratory



Scholarship

2014 Winners

Foetal Programming

RICHARD HUGH TUDOR (LIVESTOCK FARMER, WALES)

“Much of the research work undertaken is scientifically based, but the adoption and understanding of the research findings into on-farm management strategies is vital if we are to maximise the potential of our animal genetics.”



Richard had previously visited the US as part of a study scholarship awarded by ABP and ASDA to research techniques and management practices that improve the efficiency of the suckler cow. Many of the farms and research establishments he visited were ‘programming’ heifers for lifetime performance, and this included foetal programming. Due to their scale and available resources they are able to measure, record and analyse all aspects of the cow-calf production cycle, from conception to consumption, and identify trends and factors that influence the performance of cattle over their lifetime.

The fact that an animal’s lifetime performance potential is determined before it is born is a significant and important concept which needs to be fully understood and explained to all livestock producers. Key management decisions on nutrition at critical stages during gestation and the importance to minimise stresses at critical stages can have a significant effect on the future performance of the unborn foetus.

Foetal programming is a relatively new concept and area of research, especially in UK livestock. Richard wanted to look into how relevant it was to our farming systems. He spent 10 days visiting some of the leading foetal programming researchers in the US, with the main objective being to discover actual case studies that proved the concept.

New Zealand's TB testing protocol for farmed deer, contributing their holistic strategy to achieve a TB-free country

FIONA BANNERMAN (VETERINARY SURGEON, INVERNESS)

“The findings of my study tour have been presented to colleagues within SACCVS, there have been informal discussions with farmers at the BDFPA conference and I have written an article on this topic for the BDFPA magazine.”



In Britain there has been pressure from the John Lewis group, through Waitrose, to develop a farmed Deer Health Scheme to support their UK venison producer group. There is an urgent need to establish testing procedures to allow early diagnosis in deer of both bovine tuberculosis and another mycobacterial disease, Johne's disease. These are the most intransigent disease problems in farmed deer in the UK, yet in New Zealand TB infected deer herds have been reduced from the hundreds to less than ten. The aim of this project was to understand how this has been achieved and how those lessons could be applied in the UK.

Given the driving forces from key regulators within the UK, Fiona and a colleague undertook a study tour of NZ to meet key opinion leaders and researchers within NZ's Deer Industry. The majority of the tour was spent in South Island, in Dunedin. They also visited a venison slaughter plant, Mountain River, and farms near Ashburton. During a short trip to North Island they met with key regulators in Wellington. They spent time at Firstlight's base and one of their farms in the North Island, near Napier/Hastings.

A project to study fasciolosis hepatica in two designated flocks to determine incidence and possible flukicide resistance

RACHEL HAWKHEAD (VETERINARY NURSE, RENFREWSHIRE)

“The project enabled me to have a much deeper and broader understanding of how F. hepatica is affecting our ovine flocks from not only a financial aspect but how to farm sustainably and efficiently.”



The objectives of the study were as follows:

- To determine the incidence of F.hepatica using the Coproantigen ELISA test and serological antibody testing.
- To determine the degree of flukicide resistance to TCBZ.

In October 2014, sixteen lambs were randomly selected from two North Yorkshire farms and tested for the presence of Fasciolasis hepatica. Through the use of Coproantigen ELISA (enzyme-linked immunosorbent assay) and serology it was determined whether there was evidence of F. hepatica, and therefore resistance to Triclabendazole (TCBZ) within the flocks.

Liver fluke in sheep, caused by F. hepatica, causes ill thrift, economic losses and regular fatalities in sheep with high burdens. By researching the status of local current 2014/2015 fasciolosis infection, Rachel hopes to present the farmers with whom she works with efficient, cost effective fluke control regimes.