PROJECT INFORMATION SHEET

South American camelids as alternative livestock

Upland farmers across the UK have been heavily reliant upon EU support payments to be economically viable. BREXIT is expected to have a substantial impact on these producers and there is deep concern at the associated risk of agricultural abandonment and rural de-population. Production systems based on novel livestock species such as South American camelids could offer innovative alternatives that capitalize on existing livestock and grassland management expertise while delivering wider environmental benefits. Thee are four species of South American camelid; llamas and alpacas (which exist only as domesticated animals), plus guanacos and the highly-endangered vicuna (which exist only in the wild). Adaptations to Andean conditions mean that camelids are well suited to the poorer quality vegetation and harsh climatic conditions found in upland areas across the UK.

Guanacos are double-coated and produce down fibre that is finer than cashmere. However, they are very difficult to source in the UK, need deer fencing and specialist handling equipment, and require a Dangerous Wild Animal Licence. Alpaca fibre is not quite as fine but the animals do not require specialist facilities. There is also potential to develop a market for the meat based on the novelty of the product and a healthier fat profile compared to lamb or beef.

Another benefit of camelids is that their grazing habits are distinctly different to conventional livestock. Previous research has shown they will happily consume invasive hill grass species (e.g. Molinia) rejected by sheep, while avoiding plant species of conservation concern (e.g. heather). Consequently, they could deliver additional benefits in terms of habitat management, making them attractive to schemes supporting the delivery of public goods such as biodiversity and carbon storage from upland areas. Mixed grazing with camelids is also expected to lead to improved pasture utilisation and overall animal performance.

Using funding received from the Joy Welch Trust we have set up a research herd of alpacas. In addition to generating a model for livestock diversification and alternative land use, the herd will create a resource for more fundamental science. For example, camelids are pseudo-ruminants rather than true ruminants; their system has three rather than four chambers within the 'stomach' and a different pattern of motility. Considerable global research efforts are underway evaluating rumen microbiomes as a potential source of novel anti-microbials to address the pressing problem of antibiotic resistance. Our experimental herd will provide a resource for research work by staff and students exploring this and other topics where differences in comparative physiology could offer valuable new insights into biological systems. This could lead to novel strategies and products for e.g. minimising and mitigating enteric greenhouse gas emissions.

Contact for more information:
Dr Mariecia Fraser
email - mdf@aber.ac.uk
tel - 01970 823081