

# BRITISH SOCIETY OF ANIMAL SCIENCE

## Why the UK needs Animal Science...

1. We need high quality animal science to help **meet rising demand for livestock products in an environmentally and socially responsible way**. Global demand for livestock products is expected to double during the first half of this century, as a result of the growing human population, and its growing affluence.<sup>1</sup> Over the same period, we expect big changes in the climate globally.<sup>2</sup> The dramatic expansion of crop production for biofuels is already impacting on the resources available globally for food production, and hence on food supply and cost. As a result, food security is re-emerging as an important issue in many developed countries that had come to regard it as 'solved'. These interconnected issues are creating immense pressure on the planet's resources. British Animal Science can make a significant local and global contribution in this area.
2. Animal Science is essential for **delivering much of government policy on livestock** and for resolving conflicts among stakeholder priorities. For instance, animal science has contributed greatly to our understanding of animal welfare and routes to improve it, and of the environmental impacts of livestock production. Increasingly this evidence from science underpins legislation. Recent Defra-funded research has shown the high potential of animal (and plant) genetics R&D in helping to deliver on likely future policy priorities, including responding to global climate change.<sup>3</sup>
3. Animal science makes a **major economic contribution to the UK food and drink sector** – the largest manufacturing sector, worth £70 billion per annum. For example, science-based methods for selective breeding, livestock feeding and grazing management, and meat processing are worth hundreds of millions of £ annually to UK livestock industries and retailers, and help deliver high quality produce that consumers demand.<sup>4,5</sup>
4. Animal science is essential for **integrating information from the so-called 'biological revolution'** – the dramatic growth in knowledge stemming from new discoveries and techniques in molecular biology, including genome mapping and sequencing in many domestic livestock species - into practical knowledge applicable to whole animals and populations.
5. Government departments are placing increasing emphasis on **translation of scientific discovery into economic or social benefit**. Animal science has an excellent track record of achieving this, and an even more important role in doing so in future.

---

<sup>1</sup> FAO (2007). *Livestock's Long Shadow. Environmental issues and options*. Food and Agricultural Organisation of the United Nations.

<sup>2</sup> See 4<sup>th</sup> Assessment Report of the Intergovernmental panel on Climate Change; <http://www.ipcc.ch/>

<sup>3</sup> Moran, D., Barnes, A. and McVittie, A. (2007) The rationale for Defra investment in R&D underpinning the genetic improvement of crops and animals (IF0101). Final report to Defra.

<sup>4</sup> Amer, PR, Nieuwhof, GJ, Pollott, GE, Roughsedge, TR, Conington, J and Simm, G. (2007) Industry benefits from recent genetic progress in sheep and beef populations in the UK. *Animal*. (In press.)

<sup>5</sup> Pryce, J.E., Simm, G., Amer, P.R., Coffey, M.P., Stott, A.W. (2000). Returns from genetic improvement in dairy cattle over a twenty year horizon. *Proceedings of the British Society of Animal Science*, p. 37.

6. We do not know all of the challenges that face the human race in the years ahead. However, **for as long as we depend on livestock as a major source of food (or other goods and services) we must maintain capacity in the key scientific disciplines represented by animal science to meet these future challenges.** No doubt there will be regular changes in the resources available for livestock production, or their relative cost. There will be regular changes in the quantity and attributes of products required by consumers, and their relative value. So too, there will be changes in the priority society attaches to the various environmental impacts of livestock production, positive or negative, its social and cultural importance etc. However these drivers change, it is vital that we retain the capacity to objectively evaluate options, assess impacts and investigate and develop new opportunities.