



The use of animals in research at SRUC

Why use animals at all?

SRUC has a proud history of research that benefits the farming industry, farm animals and the environment, for example by investigating and improving animal nutrition, exploring how to alleviate or prevent disease, or improving animal welfare by scrutinising housing and management practices. Because much of our work is related to animals, it is important to study them as a 'whole system', and this often means that animals are a part of our work.

What do we mean by "animal"?

We use the legal definition in the Animals (Scientific Procedures) Act 1986 (hereon known as 'ASPA'), which defines an "animal" to be any vertebrate except humans, and one type of invertebrate (cephalopods, otherwise known as octopus, squid and cuttlefish). The current legal definition of "animal" is used throughout this document.

Species in use at SRUC

Most of our work focusses on farm animals and animals that can act as models for farm animal research, so we often study sheep, dairy and beef cows, pigs, chickens, and turkeys. We occasionally also use small numbers of rodents (mice, rats).

Ethical review

In the UK, it has been compulsory since 1998 for establishments that use animals for scientific procedures to have a committee to assess the ethical use of animals. This is an EU-wide legal requirement since 2013, and the committee is called the Animal Welfare and Ethical Review Body (AWERB).

SRUC's AWERB is made up of animal scientists, veterinarians, staff who do not work with animals, animal care staff, statisticians, and an external observer.

Our review process has three main streams:

- 1) Where work is to be controlled by a Home Office project licence, then the AWERB reviews and makes suggestions to the scientist on the proposed licence before it is submitted to the Home Office.

- 2) Whether or not the work requires a Home Office licence, each research programme and each individual experiment must be described by the scientist, including the perceived benefits and potential harms of doing the work, and reviewed and approved by the AWERB.
- 3) Each experiment is assessed retrospectively, to determine if the proposed hypothesis was answered, what were the actual harms and benefits, and how future studies could be refined according to the 3Rs (see below).

The AWERB also ensures that staff working with animals are trained appropriately, are supported with guidance and advice on issues related to animal welfare and ethics, and that we instil a 'culture of care' amongst our staff working with animals.

The 3Rs

During our research, our aim is to improve animal welfare and to minimise animal suffering through implementation of the "3Rs" (<https://www.nc3rs.org.uk/the-3rs>).

These are:

- REDUCTION of the number of animals used in each experiment, either by enabling comparable levels of information to be gathered from fewer animals, or by obtaining more information from the same number of animals.
- REFINEMENT of procedures to minimise any pain, suffering, distress, or lasting harm that may be experienced by the animals plus refinement of the husbandry and enrichment of the environment that the animals are kept in.
- REPLACEMENT of animals, wherever possible, with alternative models with which to conduct research.

Our process includes a retrospective review of studies in which the 3Rs are assessed, so that they can be implemented in future studies of a similar nature.

Legislative requirements

All experiments that involve the use of animals at SRUC require the approval of the AWERB. Many must also be licensed by the Home Office under ASPA. Compliance with the law is monitored closely by SRUC and by the local Home Office inspector, who makes regular visits. All licence-holders must have prior training and those directly working with animals must be closely supervised until judged to be competent to work on their own. Exacting standards of care, hygiene and environmental control are maintained in areas where animals are kept or used.

Veterinary supervision

We have named veterinary surgeons who sit on the AWERB and are available to offer advice on the health and welfare of any animal on SRUC premises and, when necessary, to prescribe and administer treatment. These veterinarians routinely visit animals that are on experiments, to ensure their well-being. If necessary, they have the power to require that an experiment stops, in the interest of animal welfare. The animals used are typically examined by the veterinary surgeon at the end of the study and often returned to normal farming activity.

Compliance

SRUC expects high standards of behaviour from all its members who are involved with the use of animals. Failure to comply with these standards can lead to withdrawal of facilities, disciplinary action, and/or prosecution.

Animal numbers

These data are from SRUC's annual returns to the Home Office for studies conducted under ASPA in **2023**. The reasons for studies are coded using the Home Office definitions. The purposes of the majority of studies at SRUC are for basic research or regulatory use (such as safety/efficacy testing in the food and feed area). Most of our studies (10,539, i.e. 93.6%) were classified as mild (in which animals experience short-term mild pain, suffering or distress but with no significant impairment of their well-being or general condition). In our line of work, often the reason for licensing the activity is a simple procedure such as the collection of a blood sample. Numbers of animals used per year vary, because our research is at various stages of progress year-on-year, and some years may require more experimental work, while other years that data is being processed for dossiers or scientific papers.

Species	No. of animals	Reason*
Cattle	340	AD, AW
Domestic fowl	5076	RU
Pigs	2718	AW
Sheep	3128	BR, AD
TOTAL	11,262	

* AD = animal diseases; AW = animal welfare; BR = basic research (e.g. immune system, musculoskeletal system); PE = protection of the natural environment; RU = regulatory use (e.g. safety testing of enzymes or ingredients in feed)