

# *Animal Science*

An international  
journal of fundamental  
and applied research

February 2000  
Volume 70  
Part 1

Published by  
*British Society of Animal Science*

Member's  
copy

## British Society of Animal Science

(formerly British Society of Animal Production)

The British Society of Animal Science aims to provide the opportunity for those with an interest in animals and animal science to exchange views, ideas and information. It is an energetic and active society with about 1300 members from over 30 countries throughout the world. Today, as ever, the Society is the natural meeting point for all of those with an interest in animal science. Its membership is drawn from research, education, advisory work, commerce and the practical livestock industry.

The Society's Journal is *Animal Science* (formerly *Animal Production*) which publishes fundamental and applied research and is a major scientific title of international repute. Papers reporting findings from basic and applied research relevant to all aspects of animal science can be found in it.

The Society organizes a major scientific meeting once a year and occasional specialist meetings on key issues facing animal production. If you would like to join or receive further information about the Society contact: The Secretary, BSAS, PO Box 3, Penicuik, Midlothian EH26 0RZ, United Kingdom.

---

### Information for contributors to *Animal Science*

Instructions for contributors in the preparation of manuscripts are printed in the first issue of each year

*Animal Science*, is published in English six times a year in two volumes. Contributions are welcomed reporting studies in all aspects of the sciences which are germane to an understanding of animals, their function and performance and their relationship to the social and physical environment. Research at the molecular, cellular, organ or system levels will be considered together with research involving whole animals, production systems and mathematical modelling. Papers will be welcome in all relevant areas including breeding and genetics, nutrition and digestion, physiology and endocrinology, reproduction, lactation, growth, health, ethology and welfare, environment and housing, food evaluation and animal products. The approach can be experimental or theoretical provided the work has been carried out in a systematic way and, in the former case, in a way which is ethically acceptable to the Section Editors who will take into account the current intent of British Scientific Procedures Acts. Articles critically re-examining published information will be considered also. Papers presenting a detailed description of a technique or of equipment will be considered. Papers in a numbered series will not be accepted unless all are presented at the same time.

A proprietary product used as a source of material in experimental comparisons should be described by the appropriate chemical name, with the trade name given in parenthesis in the **Material and methods** section only, if this is seen as helpful to readers. Authors who have worked with proprietary products, including equipment, should ensure that the manufacturers or suppliers of those products have no objections to the publication of the results in the manner intended if the products, for the purpose of experimentation, were not used in the recommended way.

Papers are published on the understanding that they have not been and, with the exception of authors' abstracts, will not be published elsewhere without the editors' written permission. Authors' abstracts can be reproduced if full acknowledgement of the source is made.

### **Views expressed in all contributions to this publication are those of the authors and not those of the British Society of Animal Science.**

*Manuscripts* should be written in English and typed or printed on one side of the paper in double-line spacing with wide margins. Each page and the lines on each page should be numbered. Three copies, one of which must be the original, of the manuscript and illustrations should be sent to:

The Executive Editor of *Animal Science*,  
British Society of Animal Science, PO Box 39,  
Neston CH64 2XT, UK.

Manuscripts are not returned with proofs: authors should therefore retain copies.

*Proofs* are supplied once and must be returned corrected to the editors within 3 days. Only essential corrections should be made.

*Reprints*. Twenty-five reprints of each paper will be supplied free of charge to authors on request. Further copies may be purchased if the order is sent at the proof-stage.

*Annual subscription* is £190-00 (or \$340-00 in the USA and Canada) and the price for a single part is £30-00 (or \$57-00) net.

*Abstracts of papers presented at British Society of Animal Science winter meeting* are published separately.

*Correspondence* regarding subscriptions and sales (current and back numbers of the Journal) and any other enquiries, including those concerning copyright, should be addressed to: Publications Office, British Society of Animal Science, PO Box 3, Penicuik, Midlothian EH26 0RZ, UK.

*Title page illustration* by Dr Anne Hurst after a clay bull from Pucara an example of modern folk-art from Peru.

An international  
journal of fundamental  
and applied research

# *Animal Science*



February 2000  
**Volume 70**  
**Part 1**