

### **Computer-directed livestock farming**

The development of intensive livestock production systems over the last forty or so years has resulted in large numbers of animals being looked after by relatively small numbers of stockmen. This widening of the animal:man ratio has been made possible by the increasing use of mechanical and electronic (computer) devices to maintain, manipulate and monitor these intensively kept animals. Nowadays it is possible to warm/ventilate and clean out animal houses by means of carefully engineered control systems; cows can be automatically milked; pigs can be permitted/refused access to a 'help yourself' feeding station according to the identification code held within their neck collar; poultry can have their body-weights regularly monitored and the stockman can be informed when the flock's weight gain deviates significantly from a preset norm. There are many potential production and welfare advantages to be gained from the use of these mechanical and electronic devices - there are also potential disadvantages, for example reduction in the stockman's contact with the individual animal, the danger of power cuts.

The Dutch Society for the Protection of Animals (DSPA) has produced a most valuable report which looks at the application of information technology in livestock farming; assesses the ethical and economic implications and, in some detail, considers the role of computers, automation and engineering in the care and management of dairy cattle, veal calves and pigs. The publication draws together much information from scattered sources on the uses and limitations of computer-directed livestock farming. The DSPA is to be congratulated on this publication and for arranging the translation of the original document into English - if for no other reason than because much of the original work on livestock farm mechanization has been done in The Netherlands and is not readily accessible to non-Dutch speaking workers.

*Animal Welfare and Computer-Directed Livestock Farming: 12th Report of the Study Committee on Intensive Farming* Produced and published by the Dutch Society for the Protection of Animals (1992). English translation by Mrs Dorothy A Oswald and Mrs Caroline Vodden of the original Dutch report: 'Welzijn en computer - gestuurde veehouderij', January 1991. 86pp. Paperback. Obtainable from the publishers, Bankastraat 100, 2585 ES Den Haag, The Netherlands. Price Dfl 10.00.

### **Research in anthrozoology**

Anthrozoology, the study of interactions between man and animals is essentially an interdisciplinary science, involving specialists in biology, psychology, social sciences, medicine and veterinary science. The subject has emerged as a speciality over the last five years, seeing the initiation of for example its first peer-reviewed journal, *Anthrozoös*, and foundation of the International Society for Anthrozoology (ISAZ).

The University of Southampton (UK) has had an interest in anthrozoology since the inception of its Companion Animal Behaviour Studies Group in 1988. It founded the Anthrozoology Institute (AzI) in October 1992 to provide a more formal basis for this work, with funding from The Waltham Centre for Pet Nutrition. The Institute has a staff of nine research workers and a Board of Consultants which consists of experts both within the university and worldwide.

The AzI's goals are as follows:-

*To conduct research into the interactions of animals with humans, both individually and collectively. All research programmes are to be conducted in a way that is compatible with the welfare of the animals being studied. Only non-invasive methods are to be used.*

*To publish the results of such research, subject to the approval of the sponsors of each subject.*

*To undertake collaborative research with other universities which have complementary interests, particularly overseas.*

Current and future research areas include welfare of companion animals, eg the behaviour of cats in animal shelters; behavioural basis for the pet-owner relationship which looks into human-directed behaviour of both the dog and the cat, and attitudes to animals, for example investigation of cultural differences in attitudes to cats. The first work to be published under the auspices of the AzI, 'Dyadic interactions between domestic dogs' (Bradshaw & Lea 1992) appears in *Anthrozoös* 5: 245-253.

**Contact address:** Dr John WS Bradshaw, Waltham Director of the Anthrozoology Institute (AzI), Department of Biology, University of Southampton, Bassett Crescent East, Southampton SO9 3TU, UK.

#### **Commercialization of new life-forms**

There is a considerable current debate going on as to the ethical, environmental, socio-biological and economic implications of man's use of biotechnology. A particular conflict revolves around the possible patenting of genetically engineered life-forms. It is as difficult, sometimes, for biologists to grasp the socio-legal arguments over these matters as it is for lawyers and philosophers to understand the underlying science and technology. The biologists' problems will be lessened by a study of the proceedings of a conference jointly convened by the Intellectual and Industrial Property Society and the Monash University Centre for Human Bioethics, held in Melbourne, Australia in October 1990. Selected papers from this conference were printed in 1991 in *Intellectual Property Forum: Journal of the Intellectual and Industrial Property Society*. The eleven published papers, which mainly cover the ethical, social and legal arguments over the patenting and commercialization of new life-forms, are a most useful source of opinion and information in this difficult but most important technological area.

***Ethics and intellectual property: should we create and commercialise new life-forms?*** *Proceedings of a conference jointly convened by the Intellectual and Industrial Property Society and the Monash University Centre for Human Bioethics, Melbourne 19 October 1990 in Intellectual Property forum: Journal of The Intellectual and Industrial Property Society Inc. Issue 14 - May 1991* Edited by Michael McDonald (1991). Intellectual Property Forum: Melbourne. 67pp. Paperback. Obtainable from The Resources Officer, Centre for Human Bioethics, Monash University, Clayton, Victoria 3168, Australia (ISSN 0815 2098) Price A\$12 plus A\$8 airmail postage.