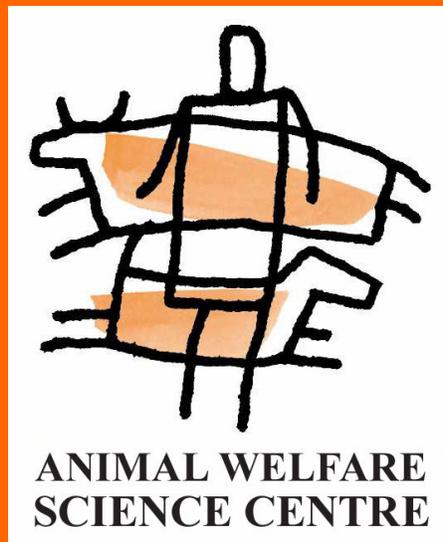




Animal Welfare Science Centre



**Strategic RD&E
priorities
2008**

Introduction

The Animal Welfare Science Centre is a joint Centre of the University of Melbourne, Monash University and the Department of Primary Industries Victoria.

The Centre conducts animal welfare research and development within four program areas:

1. Welfare methodology
2. Housing and husbandry effects on animal welfare
3. Attitudes to animals and animal welfare, and farmer, consumer and community behaviour
4. Tertiary and post-graduate education and training

This document is a result of formal and informal discussions between staff of the Centre and several key stakeholders.

The Centre will utilize this document to develop, undertake and deliver research and education programs which are consistent with the priorities which have been identified.

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Strategic RD&E priorities for the AWSC 2008

PROGRAM 1. WELFARE METHODOLOGY

The community generally accepts the role of the scientific method to solve problems. However, the ability of science to contribute to the animal welfare debate has been limited by a lack of consensus on the scientific approach to studying animal welfare.

Assessment of animal welfare is a complex task and scientists differ in their views on how animal welfare should be judged. There are three prominent concepts where animal welfare is judged on the basis of normal biological functioning; affective states, such as suffering, pain and other feelings / emotions; or natural living expressing normal behaviour. In attempting to assess animal welfare, scientists select different criteria or methodology reflecting one or more of these concepts of animal welfare, which in turn leads to different interpretations on animal welfare. This conceptual and scientific uncertainty has affected the credibility of animal welfare science and its role in the welfare discussion.

The main objective of this research program is to examine whether a broader consensus on the concept of animal welfare can be achieved and therefore reduce these conceptual and methodological differences in animal welfare science. This will be achieved by comparing two of the above mentioned methodologies: the functioning-based approach and the preference approach. Animal functioning studies are integrated studies of animal behaviour, physiology, health and fitness that aim to assess the status of an animal's welfare in terms of its biological functioning. Animal preference studies use preference tests to study an animal's perceptions of its requirements or the adequacy of its environment as a measure of its welfare. Stress models incorporating key, commercially-relevant, challenges for animals (nutritional, social and spatial restriction, and environmental complexity) are used to determine the animal's fundamental biological requirements (as assessed by its behavioural, physiological and fitness responses) and the animal's preference (i.e. preference may reflect what is important to the animal) for these resources. The comparative findings can then be used to examine the complementary nature of these two approaches.

This program of research encompasses the traditional fields of animal behaviour and physiology in furthering our understanding of both fundamental animal requirements and preferences, and stress-induced perturbations within the normal biological functioning-based concept of animal welfare. With a broad consensus on an animal welfare model, welfare measures can be utilised in both research and in the field to provide scientifically-valid and defensible standards for livestock and other animal industries. Furthermore, knowledge of animals under stress can be utilised to develop additional tools to study and monitor animal welfare in both research and in the field.

Specific Project Areas for Attention in 2008

1. Continue research examining whether a broader consensus on the concept of animal welfare can be achieved and therefore reduce conceptual and methodological differences in animal welfare science. Key focus is animal functioning and preference studies.
2. Research on reducing stress in animals. Eg use of anticipatory behaviour, positive human contact, environmental enrichment, etc., on reducing animal stress.
3. Welfare implications of new technologies such as cloned animals (dairy) and extended lactation (dairy). Need to refine welfare methodologies developed in Centre.
4. Field indicators of animal welfare. Eg dairy, lamb, companion and experimental animals.

PROGRAM 2. HOUSING AND HUSBANDRY EFFECTS ON ANIMAL WELFARE

Confinement of animals, even for short periods as may occur during transport and lairage of farm animals, is a controversial issue for some sections of the general community. The main welfare concerns raised are inappropriate social contact, the inability to exercise and the restricted choice of stimuli for interaction with other animals and / or features of the physical environment.

Using fundamental and applied research, it is important to determine the effects of design features (such as space, group size, social and human contact, and furnishings) on the welfare of farm and companion animals in order to define appropriate welfare standards.

The research in Program 2, utilising methodologies developed in Program 1 addresses the most contentious welfare issues both across and within industries. One such highly contentious issue is the confinement housing of animals and thus research studying current and new housing systems for pigs, poultry and companion animals is therefore given a high priority. Some examples of specific welfare issues the Centre has examined include; effects of farrowing crate dimensions for sows, developing farrowing pens for use in commercial environments, reducing aggression following mixing of sows in conventional and alternative housing systems, effects of strain, group size and space allowance on the welfare of laying hens in conventional cages, effects of group size and space in alternative housing systems (eg. barns and furnished cages) on the welfare of laying hens, effects of nest boxes on hen welfare and effects of confinement on cats and dogs.

Studies in Program 2 will provide knowledge on the basic welfare requirements of domestic animals which can be utilised in the design of housing systems, transport and lairage facilities and management strategies for extensively-housed animals.

Specific Project Areas for Attention in 2008

1. Transport and slaughter - The main issues associated with transport are livestock handling during loading/unloading, loading density, journey duration and interaction with environmental conditions and farm management, and travel sickness, particularly in pigs. There is a need to research aspects of the transport of bobby calves. The key welfare issue in the slaughter process *per se* is achieving a 100% effective stun.
2. Mulesing - Continue to work with industry to evaluate alternative procedures. Recent research indicates further welfare research on some alternatives is necessary.
3. Confinement - Research on alternative housing systems, particularly for pigs and poultry, as industries move away from confinement systems is necessary. A major challenge is identifying space allowance for group housed animals and reducing aggression. Furthermore, with interest in feedlotting expanding to new species, eg lambs and dairy calves, there is a strong need to understand welfare implications. Confinement effects on dogs and cats, particularly in shelters, are also likely to come under increasing scrutiny, and Centre is well placed to undertake such research.
4. Lameness and injury in farm animals, especially pigs, poultry and dairy cattle. There is a need to improve our understanding of the effects of systems and design features on lameness and injury.
5. Scale of production. In both intensive and extensive industries, issues of welfare inspection and intervention become more important as scale of production increases. The Centre has the resources and capacity to investigate this issue as well as identifying and evaluating opportunities for new technologies to assist in monitoring animal welfare.
6. There is a need for further work to understand the influence of housing design and management upon experimental animals.

PROGRAM 3. ATTITUDES TO ANIMALS AND ANIMAL WELFARE, AND FARMER, CONSUMER AND COMMUNITY BEHAVIOUR

Human behaviour significantly impacts domestic animals both directly and indirectly. The Centre's research has highlighted the effects of inappropriate handling during production and slaughter on the fear and stress responses, incidence of physical trauma, ease of handling, reproductive performance, growth, productivity, health, meat quality and overall welfare of livestock. Inappropriate handling also adversely impacts fear, stress, behavioural and overall welfare of laboratory and companion animals. Indirect effects of human behaviour on all of these animals result from the impact of community attitudes on the use of animals for research, companionship and as food and fibre sources.

Community behaviours opposing animal experimentation affect the approaches of both regulators and researchers to animal research. In the livestock industries, responses of retailers and suppliers to community behaviours in opposition to agricultural practices have led to changed practices and the imposition of welfare audits on-farm in a number of countries. For companion animals, community concerns about stray cats and dogs together with dog and cat behavioural problems have led to changes to regulations and codes of practice for companion animals in many Western countries.

There is substantial evidence that the most reliable predictor of human behaviour is the attitude of the animal handler towards the animal in question. This approach has been widely applied in the intensive livestock industries to understand farmer behaviour in the context of animal productivity and welfare. This knowledge has been utilised to develop training programs, in the dairy and pork industries, targeting those farmer attitudes and behaviours that seriously limit animal productivity and welfare. Similar opportunities exist in other livestock industries.

Program 3 utilises fundamental and applied research to examine the impact of human-animal interactions in farm and companion animals, as well as public and consumer attitudes to animal welfare. The research on human-animal interactions provides a basis for targeted education and training of animal handlers/carers. Research on public and consumer attitudes provides the basis for Governments and industry to assure local and international consumers, the public and other governments that the welfare standards for domestic animals in Australia are underpinned by sound science.

For example, educating children and the community about animal welfare and issues associated with farming and other forms of animal use in society is an important component to an on-going well-informed debate about animal welfare issues. Failure to assure these stakeholders that the welfare standards for Australian domestic animals are underpinned by sound science will not only affect public confidence and risk the adoption of untested new technology in the animal industries, but has the potential to adversely influence the profitability and viability of these industries.

Specific Project Areas for Attention in 2008

1. Human-animal interactions - research strength. Extend research to include extensive livestock industries (eg sheep), laboratory and companion animals, as well as post-farm gate, eg transport (road and ship), lairage and slaughter.
2. Opportunities to ensure that ProHand packages used within the national competency framework.
3. Benchmarking/compliance - Fits objectives of AAWS. Need to consider how best to address industry sensitivities.
4. Public attitudes – how can Government/BAW and Industry use the tools developed and validated by the Centre.
5. Increase focus on selection and retention of desirable stockpeople.
6. Public education - considered strategically important for rational development of animal welfare standards. Consideration should be given to expanding animal welfare education in secondary schools.

PROGRAM 4. TERTIARY AND POST-GRADUATE EDUCATION AND TRAINING

Program 4 recognises the important role that students entering the animal industries play in providing sound, science-based advice on animal welfare practices to industry, interest groups and the public, and in being proactive in dealing with public sentiment. Teaching and training in animal welfare are delivered by the Centre via a range of subjects and courses at an undergraduate level in Australia and at Ohio State University in the USA.

The Centre is also strongly committed to providing high quality postgraduate and postdoctoral training for the next generation of researchers and teachers in animal welfare science, boasting more than 14 current postgraduate students of which, more than 12 are PhD candidates.

The Centre currently supports the development and delivery of animal welfare modules designed to be incorporated into existing university level subjects in Animal and Veterinary Sciences; and is examining funding opportunities to develop animal welfare modules for specialist groups such as practising veterinarians and stockpeople in specific livestock industries. The need to provide the community with easily accessible, relevant, education about animal welfare, particularly within the livestock industries, is essential to ensuring the welfare of our domestic animals and their central role in human society.

Specific Project Areas for Attention in 2008

1. Veterinarians are seen by the public as natural advocates for animal welfare. The Centre should consider widening the provision of AW coursework to other veterinary colleges.
2. The Centre should consider how the Graduate Certificate in Animal Welfare might be utilized to provide AW education for practicing veterinarians.
3. There is a need for AW training of staff in dog shelters. The Centre should investigate the provision of such training.
4. There is a need for specific AW training of animal handlers particularly in the livestock industries. Current efforts are fragmented.