

Aus dem Institut für Tierzucht Mariensee

Franz Ellendorff

Summary and outlook towards a science based animal welfare

Manuskript, zu finden in www.fal.de

Published in: Landbauforschung Völkenrode Sonderheft 227,
p. 81

**Braunschweig
Bundesforschungsanstalt für Landwirtschaft (FAL)
2002**

Summary and outlook towards a science based animal welfare

Franz Ellendorff

Ever since man has left the status of hunting and gathering he has domesticated animals for food production. At the same time husbandry systems have developed and selection procedures were employed. Demographic changes, urbanisation and the resulting demand for food have led to increased specialisation and performance of farm animals, have intensified highly efficient husbandry systems and resulted in regional concentrations of animal production. Well to do societies more and more object to such developments. Public acceptance of animal production is closely linked to care for the environment, quality of products and animal welfare. Animal welfare is the animals ability to cope with its environment. So far, complex and individual relations in response to the environment have not received sufficient scientific attention and lag behind legal and public demands. Environmental stimuli results in a cascade of adaptation mechanisms within the organism and activate endogenous regulatory systems including the immune system. Some reactions are reflected in behavioural expressions. Even though domesticated animals preserve basic elements of behaviour throughout evolution, environmentally dependent genetic changes in adaptive mechanisms must be taken into account. It become increasingly evident, that interpretations of the animals state of welfare can no longer be based solely on behavioural observations. Conclusions must be based on thorough functional and motivational analysis. Damage, suffering and pain must be avoided. Pain is a concept involving noxious stimuli that evoke protective motor, behavioural, emotional and physiological reactions. Pain adversely affects both welfare and productivity of farm animals. Clinical ethology may assist to analyse at least grave problems of the animals welfare and uncover underlying causes. Production diseases are frequently responsible. They often result from a combination of deficits related to genetics, husbandry and management. To reduce potentially adverse effects of husbandry systems welfare indicators have been advanced in recent years. They need critical appraisal. New technologies (e.g. biotechnology) may also compromise the animals welfare. They should be accompanied by multidisciplinary research to detect and consider deleterious side effects and welfare problems.

For the producer animal production serves to obtain income. Implementation of the societies demands for animal welfare will largely depend on incentives to the producer and on international acceptance of welfare codes to avoid export of welfare problems into countries with no welfare standards. Legal constraints must be based on sufficient scientific evidence and on established practical experience to meet the animals biological demands and to account for the animals adaptability. Most of all, the consumer needs to be prepared to bear the cost of welfare for the animal. Finally, a sense of responsibility for all parties involved will improve animal welfare. The workshop addresses these issues and hopefully contributes to a science based improvement of animal welfare.

¹⁾ Institute for Animal Science and Animal Behaviour
Federal Agricultural Research Centre (FAL)
Mariensee, Germany