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# ANIMAL WELFARE EDUCATION IN LATIN AMERICA

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## Summary

In Latin America, Animal Welfare is an emerging topic that has rapidly gained attention throughout the 2000s, mainly because of its impact on animal health, product quality, international trade, as well as consumer perception. Animal Welfare-related education must be provided at different levels, from programmes specially developed for children at primary schools to the training of animal handlers or others responsible for farm animals, and the university level where it should be offered at undergraduate, as well as post-graduate level, including scientific research. The range of people involved, in terms of age and educational and cultural background, is so broad that different teaching strategies must be adopted. This paper explains various strategies that are being used in Latin America to deliver Animal Welfare Education for children at primary schools, to train farmers, animal transporters, and other animal handlers involved in the food production chain.

**Keywords:** Animal Welfare, education, production animals, strategies, Latin America

## Introduction

Animal Welfare as a scientific discipline has its origins in the studies of motivation, stress, and veterinary science that developed between the 1960s and 1980s (Broom, 2010 a). In Latin America, Animal Welfare is an emerging topic that has rapidly gained attention throughout the 2000's, mainly because of its impact on animal health, product quality, international trade, as well as consumer perception (Tadich et al, 2010).

Because of the knowledge involved in Animal Welfare science, it is an issue that directly impacts the veterinary profession, as well as other animal science and biology-related lines of work. In order to create sustainable animal production systems, effectively use available resources, ensure good human health, develop relevant legislation, and generate social, cultural, and environmental responsibility, it is necessary to educate individuals at all levels about animal needs and Animal Welfare (Broom, 2010 a; Paranhos da Costa, 2010).

In 2006, a survey was carried out as a technical item to be presented to the Regional Commission of the OIE for the Americas in order to determine at what levels Animal Welfare Education had been carried out so far (Gallo, 2006). Of the 22 countries that replied to the questionnaire, 15 stated that they had provided training courses for their veterinary services personnel and the same number of countries offered courses on Animal Welfare at veterinary faculties and other educational institutions. Eight countries had provided training for their producers, seven for private veterinarians, seven for agri-food industry personnel, and only two for consumers.

Animal Welfare-related education must be provided at different levels, ranging from programmes specially developed for children at primary schools to the training of animal handlers or others responsible for farm animals, to the university level where it should be provided at undergraduate, as well as post-graduate level, including scientific research. In the case of Latin America in particular, the number of people involved in

handling or working with animals is high, owing to the existence of large numbers of smallholder farms. Their educational level is, in general, low so many of these farmers may not be able to read or understand some of the available information on how to improve Animal Welfare. The range of people involved, in terms of age and educational and cultural backgrounds, is so broad that different teaching strategies must be adopted.

This paper focuses on the state-of-art of Animal Welfare Education in Latin America, in special consideration of the presentations and results of the workshop “Educational strategies to promote Animal Welfare concepts and practices”, held in June 2010 in Jaboticabal, Brazil ([www.grupoetco.org.br](http://www.grupoetco.org.br)). The aim of this workshop was to present existing educational strategies to promote Animal Welfare concepts and practices in Latin America and discuss relevant issues to foster new developments.

### **Animal Welfare Education at Primary School Level**

At the primary school level, Animal Welfare Education usually focuses on increasing awareness about responsible care of pets and environmental education. For example, in 2007 Uruguay carried out a project for the training of rural teachers in animal disease and Animal Welfare issues; the aim of the project was to develop awareness of zoonoses, production diseases and Animal Welfare among children at primary school level. The project was implemented by several institutions led by the Ministry of Agriculture, Livestock and Fisheries with the support of the Veterinary Medical Association, the National Veterinary Academy, the Veterinary Faculty and the Plan Agropecuario Institute. The project was able to train 1,461 teachers and included 1,083 rural primary schools. The Ceibal Plan, an initiative of the Uruguayan Government, has considerably contributed to training programmes since each teacher and each student in the Uruguayan public school system now has a laptop computer with internet access because of this plan (César, 2010).

In the case of Chile, similar strategies have been applied; the World Society for the Protection of Animal’s (WSPA) International Animal Welfare Education Programme directed at teachers of children between 5–16 years has been implemented in several cities with the collaboration of the Chilean Ministry of Education since 2006. The same WSPA programme has been implemented in Costa Rica for over 18 years and more recently in Peru. Smaller projects have also been launched in some veterinary schools, e.g., the environmental education project at the Universidad Austral de Chile, a project that is carried out by students from the Veterinary Faculty in Valdivia under the coordination of a veterinarian; they work with children from public schools to create awareness of the wild life present in the region and the impact that humans can have on them. Other projects from the same veterinary school focus on responsible care of pets. Such projects do not only educate children, but also increase social responsibility in veterinary students.

### **Animal Welfare Training for Producers and Animal Handlers**

The lack of knowledge and suitable training opportunities for people who work with animals on a daily basis represents the main problem that affects farm Animal Welfare. The strategies implemented should include the generation of skills (how to do things), and the development of models that promote humanitarian treatment of animals and apply quality controls (Ghezzi, 2010).

In several Latin American countries over the past 5 to 10 years, awareness of Animal Welfare has increased among stakeholders involved in the animal food chain, such as producers, farmers, animal handlers on farms, livestock markets and slaughterhouses, professionals, and livestock truck drivers, among others. In this case, information about good veterinary and management practices has been transmitted through courses and seminars. In order to gain stakeholders’ and animal handlers’ attention, the strategy to promote Animal Welfare has involved demonstrating how the bad handling of meat animals on farms, during transportation, and at slaughterhouses results in economic losses by increasing the number of animal deaths, carcass weight loss, trimmings due to injections and bruising, and negatively affecting meat quality (high muscle pH, dark

cutting). In addition to theoretical aspects, the courses usually include practical demonstrations of animal handling at local facilities and visual appraisals of the damage on the carcasses (Gallo, 2009; Huertas, 2010; Huertas et al, 2010; Paranhos da Costa, 2010). A similar strategy is being used in the case of the dairy chain. Surveys in Chile have revealed the significance of understanding the needs of dairy cows and how these can be satisfied, for instance, by properly designing and constructing buildings and equipment and minimising pain in lame cows (Arraño et al 2007, Tadich 2010). Training farm workers involved in the milk production industry can also considerably improve the welfare of the animals, increase milk yields, decrease calf mortality and even enhance job satisfaction among workers (Paranhos da Costa, 2010).

On the other hand, training workshops for abattoir personnel have been used in intervention studies and their effectiveness assessed after the training, using animal behaviour and meat quality measures in slaughter plants (Gallo et al, 2003). The Welfare Quality® project in Chile, Brazil, and Uruguay has also been useful in assessing Animal Welfare through the use of their protocols in Latin America (although some modifications are needed due to differences in their production systems), in the creation of links between different research institutes, and it has the potential to be used as a basis for educational activities in the future (Huertas et al, 2010; Manteca & Köbrich, 2010). Resources for improving animal handling skills of slaughterhouse staff have also been made available in Brazil by WSPA (Lüdcke, 2010); courses have been attended by many people who work in slaughterhouses and videos have been produced that focus on the training of technical and practical details about stunning methods and equipment to be used for cattle, pigs, and poultry.

All of the above-mentioned training is related to animals that produce food for human consumption, mainly ruminants, pigs, and poultry; but in the case of animals such as equines, which are mainly used for food and work but are also considered companion animals for pleasure or sports, the situation is completely different. For example, in the case of Chile, a study showed that less than 50% of the personnel in charge of horses had training of some kind in equine handling and less than 10% in Animal Welfare (Márquez et al, in press).

Methods to educate people involved in other aspects of animal handling are also being put into practice in Brazil. Control officers are being trained to catch, handle, and keep stray dogs and cats, using techniques both to minimise the adverse effects of stray dogs and cats and to reduce any adverse effects on the welfare of these animals (García & Plaza Nunes, 2010).

Generally speaking, an aspect that has encouraged the training of stakeholders in the food chain from a governmental level in Argentina, Chile, Brazil, and Uruguay has been the fact that the adoption of Animal Welfare practices facilitates trade agreements. In the case of Chile, the free trade agreement with the European Union has been key for improving the welfare of beef cattle. This is probably the reason why most of the training has taken place at one or more levels of the food producing chain. At farm level, the adoption of “good management practices” and “animal farms under official control” (PABCO-Chile) certifications, which include some Animal Welfare aspects, are schemes provided by the National Agricultural Service (SAG) (Gonzalez et al, 2004). It is important to communicate information about AW to all veterinarians, especially those working for the government, as well as to the owners of farms, workers in all areas of animal production and, to some degree, to the general public. Similar educational activities, as well as the existence of governmental “Animal Welfare Commissions” were reported for several other Latin American countries at the workshop held in Jaboticabal, Brazil (Argentina, Brazil, Cuba, Uruguay).

On the other hand, the OIE is also encouraging its member states to implement Animal Welfare standards (OIE, 2009); therefore, an Animal Welfare Focal Person has been appointed in each member state whose mission it is to promote AW locally. However, in Latin America, the AW Focal Person is usually a member of the official veterinary services of the given country, and does not have specific knowledge in AW. Focal Persons thus need to be trained in AW before they can start promoting the issue in their country. Consequently, workshops with experts are being organised in different countries by the OIE in order to train Focal Persons for their new mission.

## **Animal Welfare Education at the Undergraduate and Post-Graduate Level**

With regard to the inclusion of Animal Welfare topics at the university level in veterinary faculties or other higher educational institutions, countries such as Brazil, Colombia, Costa Rica, Honduras, Peru, Chile, and Argentina offer specific courses on the subject, while other countries include the topic as part of other courses (Gallo, 2006). In fact, one of the recommendations as a result of the 18th Conference of the Regional Commission of the OIE for the Americas was to stimulate the creation of Animal Welfare-related courses in order to improve knowledge of the issue not only among students, but also among professionals, and that these courses should include the teaching of the OIE's Animal Welfare standards (OIE, 2006).

Training academic staff in Animal Welfare is essential for designing a course that meets student requirements and inspires them to acquire more knowledge on the subject, applying concepts learned at the university to their professional practice or developing research in these areas. Tadich et al (2009) state that one limitation of AW teaching in Chile is the lack of instructors with adequate training. It can be said that this is a limitation in most Latin American countries which is, in part, a consequence of the lack of the issue of AW in the courses today's teachers took when they themselves were students. Courses on animal nutrition and animal genetics, for example, rarely make any reference to behaviour or welfare, despite the obvious overlap between the subject areas and the relevance of one for the other (workshop report 2010). As has been said before, AW is an emerging topic in Latin America and the lack of instructors with knowledge of AW should be improving.

One strategy used in Latin American countries to implement Animal Welfare Education at the university level has been through the use of WSPA's and the University of Bristol's "Concepts in Animal Welfare" (CAW) programme; although this course only provides a guidance to instructors and is not equivalent to a continuing education programme, it has been used to train instructors in Colombia, Chile, Brazil, and Uruguay.

In the case of Chile, the topics included in CAW have been taught to second year students of Veterinary Medicine at the Universidad Austral de Chile in an optional Animal Welfare course since 2006; later, in their final year, students have a course on applied Animal Welfare, where they can study professional applications of the subject in more detail. The course was only introduced in 2008. Another Chilean university that has specific courses on Animal Welfare is the Universidad Mayor, the first school to introduce a mandatory course on Animal Welfare in its curriculum in 2002. In the case of Chile, in particular, the emphasis on Animal Welfare appears to have emerged in the past 10 years because of some professionals' training in this area and because of academic links with specialised groups, especially British groups (Tadich et al, 2010).

In the case of Brazil, some of those who now offer Animal Welfare courses participated in courses on the science and teaching of applied animal behaviour and Animal Welfare which were organised between 1992 and 2009 at UNESP, Jaboticabal, by Dr. Mateus Paranhos da Costa with Prof. Donald Broom as one of the lecturers. Conferences relating to Animal Welfare during housing, transport, and slaughter have been arranged in Jaboticabal, Porto Alegre, Concordia, Campo Grande, Brasilia, Goiania, Curitiba, and Rio de Janeiro by Paranhos da Costa, Adroaldo Zanella, Carla Molento, WSPA, and others during the last 15 years. External speakers such as Broom, Neville Gregory, and Ana Pinto have contributed. The first Animal Welfare course taught to veterinary students by Brazilian lecturers was in 1999 at the Universidade de Brasilia. Today, one third of the 160 institutions offering veterinary programmes in Brazil offer Animal Welfare teaching courses (Molento, 2008; Molento & Calderón, 2009; Tadich et al, 2009).

Four courses of applied ethology and Animal Welfare taught by Professor Donald Broom, Dr. Temple Grandin, and Dr. Gerrit van Putten at the Universidad Nacional Autónoma de México (UNAM) between 1989 and 1993 were organised, with the aim of training academics that would later be in charge of lecturing the applied ethology and Animal Welfare courses, which were already included in the curriculum of the university in 1993. In 2003, the curriculum was modified so that it would include mandatory, as well as optional Animal Welfare courses (Galindo, 2010)

The topics emphasised in the undergraduate teaching of Animal Welfare at the different schools in Latin America include farm animals, companion animals, working animals, wildlife, zoo animals, and to a lesser degree laboratory animals (Tadich et al, 2010). How much emphasis is given to each topic depends on the university's research and academic strengths.

Postgraduate Master's and Doctoral degrees also offer courses on the subject in some countries. In Brazil, the first postgraduate course on AW was taught in 1998 at the Universidade Federal Fluminense, whilst in Chile, Animal Welfare is included as a topic for postgraduate research at the Universidad Austral de Chile. In 2010, the Universidad Mayor introduced a Diploma in Veterinary Clinical Ethology and Animal Welfare. Applied ethology and Animal Welfare was included in the postgraduate programme at the UNAM in Mexico in 1998, with over 30 graduates in the area so far (Galindo, 2010).

Even though the teaching strategies might differ between countries, they all seem to agree on the concepts that Animal Welfare courses must include, such as ethics and scientific concepts of Animal Welfare, animal behaviour and animal needs, legislation, uses of animals, and Animal Welfare assessment strategies (Broom, 2005). In each country, these concepts are taught in accordance with the country's social and religious views. Consequently, the main research topics in relation to Animal Welfare at some veterinary schools in Latin America are related to the humane slaughter of farm animals, wild animals, transport of animals, husbandry of animals (with an emphasis on cattle, pigs, and poultry), control of stray dogs, laboratory animals, working animals (horses and donkeys), animals used for traditional festivities and sports, and the humane slaughter during disease outbreaks (Tadich et al, 2010). Animal Welfare is part of the broader aspect of sustainability in agriculture and of product quality and can be introduced to the curriculum in this way (Broom 2001, 2010).

### **Other Strategies for Animal Welfare Education**

Another way of disseminating information about Animal Welfare topics and relevant research on the subject is through the organisation of conferences, workshops, and seminars. Since 2004, numerous national and international meetings dealing with Animal Welfare have been organised in countries such as Argentina, Brazil, Chile, Colombia, and Uruguay. During 2009, the Animal Welfare Programmes of the Universidad Austral de Chile and the Universidad de la República del Uruguay were officially recognised by the OIE as a Collaborating Centre for Animal Welfare Research Chile-Uruguay; the first event organised by the new Collaborating Centre was the 1st Meeting of Animal Welfare Researchers, which was held in Valdivia, Chile, in November 2009. This meeting attracted more than 140 people from 12 Latin American countries, who presented 60 posters displaying research activities currently ongoing in the region. Most National and Pan-American Veterinary Congresses in Latin America today include a specific topic on Animal Welfare.

The use of new technologies for Animal Welfare teaching or the delivery of information related to research in the area is also important, since these allow a higher number of persons to be reached at lower costs. Many Latin American university teachers took the on-line Cambridge e-learning course on Animal Welfare in English and Portuguese offered by Cambridge, U.K. by Dr Ana Pinto. Several Animal Welfare groups in Latin America have their own websites with free access to information; scientific papers and other helpful documents and didactic material can be downloaded; news on courses and conferences are disseminated and visitors can send their inquiries to researchers. Some examples of these websites are: [www.bienestaranimal.cl](http://www.bienestaranimal.cl) by the Animal Welfare Programme of the Universidad Austral de Chile; [www.bienestaranimal.org.uy](http://www.bienestaranimal.org.uy) by the Animal Welfare Group of the Universidad de la República, Uruguay; [www.grupoetco.org.br](http://www.grupoetco.org.br) by the Ethology and Animal Ecology Group at the São Paulo State University, Brazil. Some e-learning material is also being integrated in some of these web pages, as is the case of the "Interactive guide for the handling of cattle", recently made available on the Chilean webpage.

Another strategy used to promote Animal Welfare at different levels in Latin America has been the development of written materials such as fact sheets, booklets, and other didactic material containing information

on how to properly handle production animals on farms, during transport and slaughter; some of them have also been developed for children at school level. All three groups mentioned above are continuously producing such materials, which include plenty of photographs, drawings, and diagrams that make Animal Welfare easy to understand even for people with little education.

Strategic alliances between countries are necessary in order to put internationally accepted standards (OIE, 2009) into practice and complement the efforts of different groups working in Animal Welfare within Latin America.

## **Conclusions**

The conclusions of the general discussion during the workshop held in Brazil in June about the future of Animal Welfare teaching were summarized by Broom (2010 b); they partly focused on advocating the occurrence of such courses and partly on the practicalities of preparing and presenting courses on Animal Welfare.

Children in schools can be taught about the basic functioning of animals as individuals with brains and abilities to control their environments. They can also be taught to respect living beings and be introduced to basic ethical issues of what is right or wrong in this regard.

The idea can be introduced that individuals, including commonly encountered animals, have diseases, pain systems, and welfare that can be assessed using measurements. At universities, all students who work with or study animals should receive some instruction about Animal Welfare. The courses can be based on those described above and are important because these students will eventually be the teachers of the future. It was generally agreed that all those who work with mammals, birds and fish, for example, on farms or in laboratories, should be required to attend courses on Animal Welfare, including information about animal diseases. Much of the key information required in these courses concerns simpler or more elaborate descriptions, depending on the educational level of the recipient. Although face-to-face training in courses is the best method of instruction, booklets and other documents and materials, including videos on the internet, are also valuable.

It was deemed that a summary of the information presented in the workshops could be made available to the public and presented to relevant government departments in Latin America.

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