

## United States Department of Agriculture: building bridges through innovative animal well-being initiatives

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### Abstract

Animal well-being issues are addressed by the United States Department of Agriculture (USDA) through a variety of agencies and in various formats. Most farmers are good stewards of their animals and will raise them according to societal demands as supported by market choices. Management standards that are perceived to improve upon current practices are being demanded of farmers by buyers of animal products, including corporate restaurant chains and groceries. Professional organisations, USDA, and university representatives, help to address well-being issues and help to create and evaluate standards. The USDA provides leadership in several cooperative programs involving activists and industry, coordinates certification programs, and provides liaisons to multi-state university research committees. A USDA Animal Well-Being Work Group facilitates communications among agency personnel. The USDA developed the Animal Welfare Issues Compendium, a national animal well-being symposium, and cooperates with industry, activists and universities on projects. The USDA provides grant funds for projects that are encouraged to include a component on animal well-being. Special grant funds from Congress have resulted in educational and research projects that complement existing USDA national research and educational initiatives. Regulatory commitments by USDA include the enforcement of the Animal Welfare Act and the Humane Methods of Slaughter Act.

**Keywords:** animal welfare, cooperation, ethics, humane, regulations, research

### List of acronyms used

AAA	Animal Agriculture Alliance
AMS	Agricultural Marketing Service
APHIS	Animal and Plant Health Inspection Service
ARPAS	American Registry of Professional Animal Scientists
ARS	Agricultural Research Service
AVMA	American Veterinary Medical Association
AWA	Animal Welfare Act
AWIC	Animal Welfare Information Center
CRIS	Current Research Information System
CSREES	Cooperative State Research, Education and Extension Service
FASS	Federation of Animal Science Societies
FSIS	Food Safety Inspection Service
HMSA	Humane Methods of Slaughter Act
IFAFS	Initiative for Future Agriculture and Food Systems
LGU	Land Grant University
NAL	National Agricultural Library
USDA	United States Department of Agriculture
WCC	Western (Region) Coordinating Committee

### Introduction

The United States production and marketing system has been characterised by free enterprise and minimal restrictions by federal and state governments. The management of animals has been the responsibility of farmers and their advisors, who come from allied industry and the university system. The Land Grant University (LGU) system was created to support agriculture and to provide higher education to the public through extension, teaching and

research programs. Federal and state governments contribute to LGU programs, both directly and indirectly. Several federal efforts provide funds for basic and applied research, and provide assistance to research committees at LGUs.

Most Federal involvement in animal production and processing is through the United States Department of Agriculture (USDA) agencies such as the: Cooperative State Research, Education and Extension Service (CSREES); Animal and Plant Health Inspection Service (APHIS); Agricultural Research Service (ARS); Agricultural Marketing Service (AMS); and the Food Safety Inspection Service (FSIS); with collateral responsibilities being undertaken by the Food and Drug Administration. An exceptionally important unit providing information, training, and other support relative to regulated animals is the ARS National Agricultural Library (NAL) Animal Welfare Information Center (AWIC: <http://www.nal.usda.gov/awic>).

Regulations for the production and marketing of commodities have been put into place as needed. Federal and state regulations address animal well-being<sup>1</sup> issues related to animal management and processing.

<sup>1</sup> The term 'animal well-being' is roughly equivalent to, and often used interchangeably with, the term 'animal welfare'. These terms are distinctly different from the term 'animal rights'.

This paper outlines how the many components of diverse programs work together to support voluntary animal well-being efforts, and highlights some animal well-being programs influenced by USDA, while recognising that an exhaustive treatment of this topic is beyond the scope of this paper. These types of cooperative efforts may not receive recognition on the world stage and may lead to the perception that the United States system is not up to par with that in Europe.

### **USDA involvement with professional and related organisations**

The Federation of Animal Science Societies (FASS: <http://www.fass.org>) is a consortium of professional animal-science-related organisations. FASS is an effective advocate and provides scientific perspectives to decision makers. It is responsible for updating and publishing the *Guide for the Care and Use of Agricultural Animals in Agricultural Research and Teaching* (FASS 1988 [Revised in 1999]). USDA personnel were involved in creating the original edition and in the revision. The Council for Agricultural Science and Technology (CAST: <http://www.cast-science.org>) is a professional organisation that works with university and USDA personnel to provide objective reports on emerging and critical issues (eg CAST 1997, 1998, 2002). These documents are useful at many levels and serve as points of discussion. The American Registry of Professional Animal Scientists (ARPAS: <http://www.arpas.org>) is a professional organisation that provides certification of animal scientists from diverse backgrounds within several categories through testing and continuing education, and which maintains a commitment to a code of ethics. Through cooperation with a CSREES representative, ARPAS is initiating the process to develop animal well-being as a formal certification category.

A symposium entitled *Bio-Ethical Considerations in Animal Production* was held at the 2003 Poultry Science Association annual meeting. The symposium was coordinated by a CSREES representative, who is also the USDA liaison to the sponsoring multi-state research committee — the Western Region Coordinating Committee 204 (WCC-204), Animal Bioethics. The WCC-204 committee has also previously held symposia as part of the American Society of Animal Science annual meetings. One function of these symposia was to educate members about the extent and importance of ethical issues in animal production.

The American Veterinary Medical Association (AVMA: <http://www.avma.org>) holds periodic special symposia or other meetings (eg Audin 2001), which address animal welfare concerns, especially as they relate to animal health. The AVMA also has a standing committee that regularly deals with these issues and develops policy for the Association. USDA personnel are involved in these committees.

### **Industry, advocate/activist, and USDA cooperation**

The Future Trends in Animal Agriculture committee is organised by volunteers representing the animal industries,

advocacy groups, and USDA personnel. These individuals attempt to set aside personal and organisational areas of emphasis to create programs that reflect the common goals of reducing polarisation and creating opportunities for honest dialogue among all entities regarding animal well-being issues. Neither animal advocates nor industry are of a single mind regarding animal well-being issues, with each group contributing representatives to the broad spectrum of beliefs and backgrounds about these issues. The intent of these programs is to enhance mutual goodwill and the understanding of members in the various organisations, who discuss various concerns and attempt to find a middle ground regarding these issues. Their one-day annual meetings were initiated in 1989 and, after a hiatus in the mid-1990s, a symposium was held in 2002 (*Standards for Food Animal Production: Status, Well-Being and Social Responsibility*). Another symposium (*Sharing Costs of Changes in Food Animal Production: Producers, Consumers, Society, and the Environment*) and a round-table discussion (*The Science and Ethics behind Animal Well-Being Assessment*) took place in 2003.

The Animal Welfare Issues Compendium (<http://www.nal.usda.gov/awic/pubs/97issues.htm>) is an animal well-being document that is available nationally, and was initiated through the cooperative efforts of animal rights and protection activists and USDA personnel. Henry Spira (Animal Rights International) provided extensive support for the project's completion. The 14 fact sheets (eg *A Critical Analysis; Animal Exhibits, Shows and Fairs; Dairy; and Swine*) together make up the compendium. All fact sheets were double-reviewed by committees composed of personnel from animal activist organisations, industry, LGUs and USDA. The purpose was to define a baseline of knowledge and a starting point for discussions on these issues.

The Livestock Conservation Institute (now the National Institute for Animal Agriculture: <http://www.animalagriculture.org>) has provided leadership to address animal welfare issues and incidents of cheating by youth competitors and their adult mentors at fairs and exhibits<sup>2</sup>. Animal industry representatives, animal advocates, and USDA personnel worked together to develop comprehensive programs to attempt to correct these problems (eg the *Just Do The Right Thing* program [Jeff Goodwin: [jgoodwin@uidaho.edu](mailto:jgoodwin@uidaho.edu)], which was promoted nationally).

Congressional funds were made available for USDA/CSREES and USDA/ARS to provide animal well-being assistance to the animal industries. CSREES funds supported the ARS focus on pig well-being and housing,

<sup>2</sup> In livestock competitions at fairs and exhibits, prizes offered for the best entries by youth competitors over time grew to such a size that it was economically feasible for some parents to purchase high quality stock and hire professionals to assist their child. This situation also led to other activities outside the rules of fair play that further provided an advantage to the competitor. Leaders of youth programs are attempting to forthrightly address this situation by taking corrective action, and by instituting educational programs.

through training and educational programs on housing alternatives for pigs. The CSREES organising committee was composed of animal welfare and animal industry organisations, LGU faculty, and USDA. CSREES, through Purdue University as the lead LGU, organised the *Swine Housing and Well-Being Symposium* held at the Kent Feeds P.O.R.K. Academy in 2002. The symposium was videotaped and proceedings (Reynnells 2003) are available from the author or from Ed Pajor at Purdue University (pajor@purdue.edu). An extensive bibliography on training programs and alternative housing references was created by AWIC (the bibliography and proceedings are available at: <http://www.nal.usda.gov/awic>). An hour-long videotape/DVD and companion CD educational package is also being developed, with Ed Pajor as the lead.

In 1992, the USDA Cooperative State Research Service (now part of CSREES) led the development of a national symposium on animal welfare. This was one of the first national efforts to bring together animal advocates, industry and government personnel to discuss animal welfare concepts and management options with all entities having representation on the organising committee. Proceedings were provided to participants in this one-time event.

#### **CSREES multi-state research committees**

LGU multi-state research committees are administered within geographic regions, with membership primarily from LGU and ARS personnel. Each committee is assigned a CSREES liaison and an administrative advisor from a LGU. There are 69 animal-related committees for the current fiscal year (2003), with a rough distribution into the categories of: management; environment; nutrition (25); genetics (13); health/disease (10); stress (3); behaviour (1); bioethics (1) and other (16). Research committees enable LGU and government personnel to have broad networking and collaborative research opportunities.

WCC-204, Animal Bioethics, is a highly innovative and important research committee. Its objectives include: to create a forum in which animal and non-animal scientists may work together to examine and discuss contentious social issues; to encourage the development of research projects dealing with the bioethics of the animal sciences; and to provide a means for critical analysis of the animal science professions regarding their ability to address moral and socio-political issues. It is clear that the animal system (ie industry, university, and government entities) can no longer ignore social ethics, and that debate must be based on honesty, mutual respect, transparency, and science. Consumers must be informed of the advantages and disadvantages of all aspects of production systems. They can then vote at the marketplace through purchases that reflect their animal welfare or other concerns. If continued in the long-term, this will create a dependable consumer demand that is both consistent and effective, and upon which farmers can develop production commitments.

North Central Region 131 (NCR-131), Animal Care and Behaviour, is a coordinating committee for research that

evaluates the behavioural responses of animals to various stimuli, and is developing a behavioural dictionary in video format. The Western Region 173 (W-173), Stress Factors of Farm Animals and their Effects on Performance, has objectives that include the identification of appropriate measures of animal stress and well-being, and the evaluation of management strategies that minimise the detrimental effects of animal stress.

#### **USDA, CSREES and ARS programs**

The Current Research Information System (CRIS: <http://cris.csrees.usda.gov>) is an important database for USDA research programs and can be searched using a variety of strategies to obtain information on research components such as animal well-being. CRIS is the documentation and reporting system for on-going agricultural food, nutrition, and forestry research, and contains over 30,000 descriptions of current, publicly supported research projects in the USA.

The USDA has in place an informal Animal Well-Being Work Group that meets quarterly to discuss current issues and to bring other personnel in USDA up-to-date with events and up-coming items of interest. APHIS is the lead organisation, with organisational support from CSREES. Animal well-being is a top priority for these professionals, who conduct programs accordingly.

AWIC has been very influential in improving the understanding of well-being issues related to laboratory and farm animals. The centre was established as mandated by amendments to the Animal Welfare Act of 1985, as amended, that directed the establishment of an 'information service' at the NAL, and was inspired by the work of the late Christine Stevens of the Animal Welfare Institute. AWIC is in charge of providing information to those regulated under the Act, and it supports searches by the public, and by government agencies, including those that have inspection, enforcement, or educational responsibilities. AWIC has produced a large number of professional quality bibliographies (see <http://www.nal.usda.gov/awic/pubs/awicdocs.htm>).

The ADDS (Agricultural Databases for Decision Support) programs respond to agriculture's need for broad expertise and for the rapid availability of knowledge. Databases include animal welfare topics and have been developed for several food animal species. A CSREES representative was important in initiating these programs.

AMS is responsible for the supervision of animal commodity check-off funds that are used for generic promotion and for educational activities. These commodity organisations also support animal well-being committees and educational programs. AMS also supervises third party certification program options. Organic production and processing includes animal well-being as part of its philosophical basis, and is a major AMS effort. Process Verified is a related program that provides third party certification for specific and unique company criteria. The Poultry Section provides an independent audit service for the certification of egg producers according to guidelines created by

the United Egg Producers, an association that represents approximately 90% of the total table egg producers in the United States.

ARS research initiatives in animal well-being include federal leadership and funding of research units in states. ARS is the primary research agency of the USDA, and takes leadership on agricultural problems that are difficult and are of national priority. ARS scientists conduct research on animal well-being at five locations within the National Program 105, Animal Well-Being and Stress Control Systems. Visit the ARS National Programs website for Animal Well-being and Stress Control Systems at <http://www.nps.ars.usda.gov/programs/programs>. The ARS Livestock Behavior Research Unit has a collaborative relationship with Purdue University's Animal Well-Being Center, which is composed of several departments and colleges on campus, and focuses on poultry, pig and dairy cattle well-being issues. The ARS Livestock Issues Research Unit (Lubbock, Texas) has a collaborative relationship with Texas Tech University to study the relationship between animal well-being and food safety in cattle and in pigs.

### University consortia and cooperation

Michigan State University led the development of an undergraduate teaching tool, the Collegiate Animal Welfare Judging/Assessment Contest, to enhance understanding and awareness of food animal welfare issues, and to provide a model for teaching ethical reasoning. The contest was sponsored by agricultural and Michigan State University special funds, and by the Humane Society of the United States (HSUS: <http://www.hsus.org>). Through CSREES efforts, the Animal Agriculture Alliance (AAA: <http://www.SoundAgScience.org>) will join in support of this program, and CSREES will assist in the use of this type of contest in youth programs. Michigan State University is also taking a leadership role in creating a consortium of mid-west universities (with Ohio State, Purdue, and Guelph) and ARS researchers to address animal well-being issues on a regional basis.

Interest by undergraduate and graduate students in the areas of animal behaviour and animal well-being is encouraged through the cooperation of personnel at university animal well-being centres of excellence, or focus areas (eg multi-state research committees). CSREES personnel have been involved in the development of increased cooperation on several of these related activities.

### Industry cooperation

The AAA represents animal commodity groups in various educational efforts. Their mission is to support and promote animal agricultural practices that provide for farm animal well-being through sound science and public education. Animal well-being is viewed as a major issue that must be dealt with on a professional, ethical, and scientific basis.

The FASS/ARPAS Animal Care Project for AAA is a project to develop criteria and a process to evaluate species-specific farm animal well-being guidelines relative to their

compliance with the AAA Animal Care Principles. These principles promote animal well-being and the production of high quality food animal products. Industry is committed to upholding these principles.

The Colorado Cattleman's Association (Arvada, Colorado), through their Animal Welfare Code of Ethics, communicates the need for the proper care of food animals and demonstrates cattle producers' commitment to proper and humane animal care. They believe it is a livestock producer's duty to oppose the inhumane treatment of livestock at any stage of the animal's life, and they affirm that cattle producers will provide assistance to officials investigating and prosecuting those who abuse livestock. These sentiments should not be considered unusual, particularly when one recalls that farmers are viewed by many as the original animal welfarists.

For many years the American Meat Institute (AMI: <http://www.meatami.com>) has taken a leadership role in the development of guidelines for humane animal handling and in the implementation of training programs for industry personnel. AMI has initiated cooperation between industry, university, and government personnel to identify better methods of ensuring animal well-being. Proper livestock handling is very important to meat packers for obvious economic, regulatory, and ethical reasons, but there are still problem areas related to downer animals<sup>3</sup> reported in pig and cattle slaughter and other facilities.

The Food Marketing Institute (FMI) and the National Council of Chain Restaurants (NCCR) have joined forces after pressure by animal activist groups, to establish management standards for producers (<http://www.nccr.net/newsite/mediacenter.html>). Their Animal Welfare Expert Advisory Council, which is composed of university, professional and advocacy organisation personnel, has reviewed existing producer animal welfare guidelines, identified gaps, and recommended specific changes.

### CSREES programs

The Initiative for Future Agriculture and Food Systems (IFAFS) had components that encouraged cooperation among universities that included research on animal well-being measurements. While funding for those programs is not currently available, animal well-being components of other grant programs continue to be encouraged.

CRIS data for the years 1999, 2000 and 2001 show that the number of animal well-being related research projects supported by federal and non-federal funds increased (from 315 to 322 and 367 respectively), the number of scientist years in states increased (from 34.9 to 42.4 and 44.7 respectively), and the total amount of funding increased (from

<sup>3</sup> Downer animals are those that are non-ambulatory for whatever reason. Inadequate understanding, training, empathy, time constraints, or other reasons, have led to animals being forcibly removed from transport vehicles, allowed to suffer in holding areas, or being exposed to other abuse. Media exposure by animal advocates has led to widespread educational programs by industry, and these have contributed to attempts to correct this problem.

11.272 to 14.636 and 22.777 million US\$ respectively). Likewise, animal well-being related research supported with CSREES funds significantly increased over these years. The number of projects increased (from 265 to 266 and 308 respectively), with Hatch Act funding increasing (from 0.944 to 1.018 and 1.204 million US\$ respectively), National Research Initiative funding increasing (from 0.100 to 0.576 and 1.538 million US\$ respectively), Evans-Allen (1890 institutions) funding increasing (from 0.063 to 0.117 and 0.114 million US\$ respectively), Animal Health and Disease Section 1433 funding increasing (from 0.040 to 0.057 and 0.070 million US\$ respectively), and other grant programs funding also increasing (from 0.044 to 0.157 and 3.518 million US\$ respectively), including IFAFS in 2001. Total funds allocated to animal well-being related research were 1.191, 1.924, and 6.444 million US\$ in 1999, 2000 and 2001 respectively.

### **Animal well-being regulatory responsibilities**

USDA does not take regulatory responsibility lightly and likewise does not attempt to over-regulate an industry. There are several reasons for this. Educational programs appear to be superior to regulations when evaluated in several ways. Regulation enforcement is expensive and has a debilitating effect on innovation and progress. It is impossible to have direct regulatory control over every producer. Most farmers are wary of regulations, particularly if they are perceived to be enforced by regulators who have limited appreciation for livestock production and its related risks. Animals might tend to suffer with excessive regulations. American farmers have been considered to be good stewards of their land and of their animals, and, for the most part, this is accurate. It is obvious, however, that in every profession or group there are 'bad apples' who must be held accountable for their actions — hence the need for regulations that are both fair and equitably enforced. It is common knowledge that there are problems that have not been solved through educational programs, such as the downer animals issue (referred to previously). While most livestock slaughter and transport facilities have enacted educational programs and provide leadership to address this problem, others apparently have not been committed to solving it. FSIS inspectors at slaughter facilities are being given increased responsibility to ensure that downer animal problems and other problems do not occur. Charges of outrageous violations have been made in print regarding slaughter facilities, although these have not been publicly documented and proven. Some alleged incidents may have been tied to labour-management disputes involving slaughter line speeds.

The Animal Welfare Act (AWA) was enacted in 1966, has been amended four times (1970, 1976, 1985, and 1990) and can be found in the United States Code, Title 7, Sections 2131 to 2156. The AWA is enforced by USDA's APHIS Animal Care sub-division, which, among other things, develops regulations that interpret and are the manual for complying with the Act. The AWA regulates the care and treatment of warm-blooded animals and requires that

minimum standards of care and treatment be provided for certain animals in specific situations. Exemptions to this regulatory responsibility include research using non-regulated animals (ie rats, mice, and birds), dead animals or their parts, or agricultural animals.

The purposes of the AWA include: to ensure that animals intended for use in research, for exhibition purposes, or kept as pets, are provided humane care and treatment; to ensure the humane treatment of animals during transportation in commerce; and to prevent the sale or use of stolen animals in research. The AWA obviously would not have been necessary had there not been abuses of the system.

In 1958, the Humane Methods of Slaughter Act (HMSA) was passed by Congress; it was amended in 1978 (United States Code 7, Sections 1901, 1902 and 1906). The HMSA mandated the use of humane methods for pre-slaughter handling and immobilisation of all livestock presented for official inspection. Regulations in the Code of Federal Regulations 9, Part 313, Humane Slaughter of Livestock, covers requirements for livestock pens, driveways and ramps, handling of livestock, and the proper stunning and slaughter of the animals. All animals must be rendered insensible to pain by a single action using a blow, gunshot, electrical, chemical or other rapid and effective means, before being moved or slaughtered. In 2003, FSIS published Directive 6900.2, Revision 1, entitled *Humane Handling and Slaughter of Livestock* (<http://www.fsis.usda.gov>), which informs inspection personnel of their responsibilities and the procedures for ensuring the humane handling and slaughter of livestock, including slaughter by religious ritual methods. In addition to inspection personnel overseeing humane slaughter practices in every official livestock slaughter establishment, FSIS has hired 17 District Veterinary Medical Specialists who are responsible for ensuring uniform enforcement and verification activities throughout each district. Religious and poultry slaughter are exempt from the HMSA.

The Horse Protection Act (HPA) was first passed in 1970 and was amended in 1976 (Public Law, Sections 94–360 [see USDA/FSIS at <http://www.aphis.usda.gov>]). Congress found that the 'soring' of horses (a procedure that consists of abrading the skin of horses' limbs and applying irritants with the objective of encouraging exaggerated lifting of the front legs [Haupt & Cromwell-Davis 1977]) is cruel and inhumane, and results in unfair competitive advantages for horses that are shown or exhibited. Horses shown or exhibited while 'sore' will be disqualified. Regulations also cover the shipping, transporting, moving, delivering or receiving of any horse that is 'sore'.

In addition to the AWA and related Acts, local governments and states have passed animal welfare legislation. The public has depended on local and state animal protection laws to act as a first line of defence for those situations where enforcement is necessary. The public is encouraged to work with federal, state, and local officials and with local humane organisations to help eliminate the inhumane treatment of animals. One criticism of local regulations is that they may not go far enough to protect farm animals.

## Conclusion

There are many positive animal welfare implications of proactive individual and agency efforts to address animal well-being issues. Unfortunately, USDA's efforts may go unrecognised, and the long-term impacts of creating bridges for cooperative efforts are difficult to quantify. Bridging efforts through educational programs, regulatory options used as needed, and the initiation of cooperative efforts between activists and industry, provide proof that USDA is responsive to animal welfare issues. Animal well-being issues are complex and are related to societal demands and to a lack of knowledge by society about food production and the impact of their market choices. Societal demands may be represented as existing and strong to bolster certain arguments related to animal well-being, yet may be misunderstood or misrepresented as reflected by actual market demand versus strong/weak preferences captured on a survey. Thus, there is more work ahead; however, through a comprehensive and positive approach, progress will continue to be made to improve the well-being of animals and to address related societal issues.

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