

Addressing International Trade Complexities of Animal Welfare

One in a Series of Educational Programs Presented by the

Future Trends in Animal Agriculture

United States Department of Agriculture
Jefferson Auditorium, South Agriculture Building
Washington, DC

September 20, 2006

Edited by

Richard Reynnells
USDA/CSREES/PAS

Revised

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Preface

Richard Reynnells, NPL, Animal Production Systems
USDA/CSREES/PAS
Washington, DC

Several people have observed increasing polarization regarding food animal welfare issues over the last few years. Some meetings have been seen as opportunities for finger pointing about which party was the less virtuous, more unrighteous, more self-motivated and who cared less about the welfare of the animals, rather than as opportunities for meaningful dialogue and progress to improve the welfare of food animals. One question asked is, are the animals mere pawns in a battle of the status quo (e.g., management preferences; advocacy group goals and memberships) rather than a food resource for which we must be good stewards? Or, is this situation a religious or religion-equivalent issue that involves moral judgements that are difficult to compromise?

Through our various programs and responses to animal welfare issues are we individually and collectively creating opportunities for progress, or are we increasing issue polarization in part through our finger-pointing exercises? Is the purpose of these blame-someone-else-for-conflicts actions to create opportunities for financial gain by some advocacy groups, or to maintain the status quo by industry? How does hiding the ultimate goals of animal rights (abolition of all animal use) behind the smoke-screen of animal welfare contribute to polarization of the issues?

Why do not moderate advocacy groups and industry forge a working relationship based on an objective analysis of behavioral, physiological, and economic data, and food preferences as demanded by society through the marketplace, and use this information to create educational or other programs that maintain or improve the welfare of animals? Could they improve societal understanding of animal welfare versus rights issues? Such a cooperative effort could move groups that hide their true goals or those that are inflexible “true believers” to the margins of this debate, thus potentially creating progress rather than conflict and hopefully consistently improving the status of animals. Is such a win-win situation achievable? To not do so voluntarily would seem to invite laws and regulations that allow those with no tangible investment in agriculture (other than as a stakeholder or a job) to manage the investments of farmers. This would make farmers serfs on their own land. Or, it could help transfer US food animal production to other countries. In either case, our society loses.

Polarization of issues dehumanizes the opposition, and is a mechanism to control issues, particularly by the group perceived to have the higher moral ground. An ethical/moral approach to food animal production and processing, perhaps seen negatively as anthropomorphism, is not necessarily a bad thing. How else could farmers have been the original animal welfarists? Could they protect the animals from cold or heat or fear without having a capacity for anthropomorphism? Or is compassion a better term? Taken to extreme, probably any good concept can be detrimental and unbalanced. Today, people are not aware of why management practices are used. They do not understand that no system is perfect. Science, reason, and the farmer’s management style and capabilities must be used to evaluate the best system for a particular location. Not anthropomorphism. Not emotion. Not profit (note: everyone and every organization works for a profit, not just farmers and corporations). There is every indication

animal agriculture has lost the high moral ground in the eyes of the public through constant repetition of negative information regarding these issues, some of which is fully justified. Even though significant improvements have been made, much due to concerns publicized by advocacy groups, segments of the industry continue to provide persistent and copious evidence (animal abuse, neglect, uncaring attitude,) to groups that criticize them for whatever reason. Polarization of groups and issues exacerbates this situation and continues to stoke the fires of conflict.

What should food animal agriculture do? What should moderate advocacy groups do? Industry appears to be justifiably afraid of giving groups promoting radical reconstruction (perhaps really elimination) of intensive confinement food animal industries credibility by open discussions of animal welfare issues. The food animal industry may appear unwilling to compromise even on debatable points in fear of being pushed down that slippery slope to regulations, laws and legal standing for animals. This may happen anyway. Compromise means having to give up something, which implies having something to give up. If one does not have the high moral ground it is a matter of time before that person/group is defeated. Polarizing activist groups understand this and know time is on their side. Even though previously promoted as a concern, the welfare of small farmers does not appear to be the real concern of all animal welfare and rights groups, which would mean no size farm may be safe from conflict. If the concern for farmers was a high priority versus animal welfare goals, advocates would not help drive small farmers out of business by promoting an animal welfare referendum in a state having a very small and defenseless industry. For example, the successful Florida referendum to ban swine gestation stalls resulted in two farmers who used this management practice going out of production. This successful model is being used for an Arizona referendum. Moderate advocacy groups are actively engaged in food animal production or assistance to improve animal's lives. Scientists are focused on improving animal welfare. It would seem industry and these moderate groups could work together to address animal welfare issues outside their areas of disagreement.

Each of us that deal with animal welfare issues should ask ourselves what are our real goals regarding the well being of food animals (not animal rights, we know this ultimate goal of abolition), and if we truly represent a promoted goal of a balanced and responsible approach to improving the lives of food animals. To not do so would seem to be the first step toward hypocrisy. Many people believe we have a moral obligation to treat animals and people with respect, and provide good stewardship of our resources in the best manner possible given the conditions under which we operate. Many people on both sides of the animal welfare issue fall into this category, but differ on the mechanism of producing and slaughtering the animals. This is where cooperation, balanced scientific evaluations, and societal responsibility for their demands will result in improved welfare for animals. As interesting as these discussions may be, they do not touch on the basis for most food animal welfare discussions, which is the more difficult question as to whether we should be raising animals to be slaughtered for our consumption.

Today, we will learn of excellent progress for the benefit of animals rather than organizational benefit. Perhaps we can incorporate these lessons into how we interact with each other and make improvements for animals based on true consumer demand (what they do, not what they say in surveys).

We are honored to have Mr. Charles Conner, Deputy Secretary of Agriculture with us to provide the Welcome.

The **Mission** of the FTAA is to foster and enhance balanced and enlightened public dialogue on topics related to the nature and future of animal agriculture.

The **Vision** is: to develop programs that are inclusive and national in scope, with the committee consisting of individuals from organizations representing academia, agribusiness, animal welfare, environment, university, government and others. The FTAA seeks to present timely issues in a balanced, innovative and thoughtful manner. The Committee also seeks to enhance public dialogue and understanding about the nature and future direction of animal agriculture, and the impact of their personal decisions on this process.

FTAA **Goals** are: 1. To facilitate genuine collaboration and the ability of farmers to produce food for society, while improving animal well-being. 2. To provide opportunities for dialogue and understanding of animal well-being, environmental and other issues in an atmosphere of mutual respect of consumers, farmers, advocates, commodity organizations, and others. 3. To provide information to identify critical animal production issues and enhance greater understanding of societal desires and trends that impact production agriculture.

Introductory Comments

Richard Reynnells
National Program Leader
Animal Production Systems
USDA/CSREES/PAS
Washington, DC 20250-2220

On behalf of the organizing committee for the Future Trends in Animal Agriculture (FTAA), I want to welcome you to the 2006 symposium, "Addressing International Trade Complexities of Animal Welfare". The purpose of the 2006 symposium is to discuss some of the complicated international trade issues related to the welfare of food animals during production, transportation, and processing, including how the interaction of diverse organizations, government and industry impact management decisions. We will provide the perspectives of persons in advocacy and industry organizations, academia, and government, on these critical food animal welfare situations.

Trade issues are taking on increasing importance in how animals are raised, slaughtered, and transported. The recent initiatives of the OIE (Office Internationale des Epizooties; Organization for Animal Health) in the area of animal welfare, which are based on their worldwide leadership role in animal health issues, has significantly influenced the rapid acceptance of animal welfare as a trade issue. Presentations also include: secrets of success of the working relationship between industry, government and animal advocacy groups in Canada; several very interesting perspectives on animal welfare as a trade issue; the impact of disease threats on international trade; how, or must USA producers address trade and animal welfare issues; and, given the potential for conflict rather than cooperation, we will look at potential results of moving our animal production outside the USA. The Preface contains additional thoughts about our relationships with each other on individual and organizational levels, and how this situation affects our ability to create meaningful cooperative programs.

The FTAA organizing committee is Co-Coordinated by David Brubaker, Agri-Business Consultant; Kay Johnson, Animal Agriculture Alliance; Ken Klippen, Klippen and Associates; Richard Wood, Food Animal Concerns Trust; and, Richard Reynnells, United States Department of Agriculture (USDA), Cooperative State Research, Education and Extension Service (CSREES), Plant and Animal Systems (PAS). The FTAA organizing committee is comprised of representatives from several animal welfare and industry organizations, universities, USDA, and others. These individuals represent various views on animal production and work together to bring about positive benefits for animal agriculture and society.

The FTAA has provided a series of educational meetings dealing with current and emerging animal well-being issues and concerns. Animal well-being and production may be associated with: questions of ethics; environmental issues; food safety; consumer demands; need for regulations; rural infrastructure considerations; public health; and other concerns. These examples are thought by some to be simply directly and negatively related to today's intensive confinement commercial agriculture, while others recognize a greater complexity of these issues. The latter situation demands more than a simplistic regulatory approach to dealing effectively with these interconnected issues.

The need for everyone to understand animal welfare issues is clear, but this has been complicated by the numerous animal welfare and rights philosophies. The Future Trends in Animal Agriculture continues in our tradition of attempting to define issues of concern and then develop programs to allow persons to cooperate in discussions of the issues and to define potential alternative solutions to problems. The Mission, Vision and Goals of the Future Trends committee are outlined in the proceedings.

The organizing committee gratefully acknowledges support from several entities that allowed the symposium to take place, particularly the contributions of speakers for their significant time and effort, with some waiving the requirement for financial support. Financial support of the USDA Animal and Plant Health Inspection Service and USDA/CSREES, with the Humane Society of the United States providing the coffee break, and the Animal Agriculture Alliance for duplication of the audiotapes facilitated our ability to provide this important opportunity for improved networking and understanding.

The proceedings include the program and speaker contact information, which is provided as Appendix A. Appendix B is the list of Co-Coordinator, and Appendix C contains Power Point presentations. The primary audience members are: agency decision makers and other government personnel, representatives from animal advocacy organizations, universities, the agricultural industries, and congressional staffers. The public is welcome to attend all FTAA events. We hope that you find the proceedings enjoyable and educational. Feel free to contact any committee member for details of future programs. Contact me at 202.401.5352 for additional copies of the proceedings from this or previous years.

Please remember to fill out your evaluation form. We require your ideas to improve programs in the future.

Please note we have to adhere to a strict schedule to ensure all speakers have their allotted time. Therefore, please limit your questions to 30 seconds or less. Speakers will likewise stay within their time limitations and provide complete yet concise answers to questions. We appreciate your cooperation.

Deputy Secretary of Agriculture, Charles Conner, will provide the welcoming comments. Before his current assignment, Mr. Conner held numerous positions of importance, including several key leadership staff positions on the Senate Agriculture, Nutrition and Forestry committee. He was also a Special Assistant to the President for Agricultural Trade and Food Assistance. Perhaps of greatest significance is his farm background, where he gained first-hand knowledge of the proper treatment of animals and the complex symbiotic interrelationship between animal and crop production, and societal demands. His brother still operates the family farm in Benton County, Indiana. His strong agriculture background resulted in his deep respect for the land, the people who work it, and the animals. He has generously agreed to spend a few moments to welcome you and to share his thoughts on today's topic. Please welcome Deputy Secretary Conner.

Current Critical Issues in International Trade

David Blandford, Professor
Agricultural Economics
Pennsylvania State University

Introduction

It is almost certainly an understatement to observe that these are interesting times for those of us who spend much of our time following developments in international agricultural trade. The collapse of the Doha round of multilateral trade negotiations in July has generated considerable uncertainty about the future. Agricultural trade pressures have been building steadily since the conclusion of the Uruguay round of negotiations under the General Agreement on Tariffs and Trade (GATT) in 1994. Over one quarter of the trade disputes handled through the World Trade Organization (WTO) from the conclusion of the round to the end of 2005 have involved food and agricultural products. Two of the more celebrated cases have involved livestock products – the on-going dispute over the prohibition of imports of hormone-treated beef by the European Union, and measures used by Canada affecting trade in dairy products. It is therefore timely to take stock of the current situation and where we might be heading.

The focus of this meeting is on trade issues associated with animal welfare. In addition to reviewing some general issues relating to international trade in livestock products resulting from the collapse of the round, I shall make some comments on specific developments relating to animal welfare issues.

The Collapse of the WTO Negotiations

The latest round of multilateral trade negotiations was launched by trade ministers at their meeting in Doha, Qatar in November 2001. With respect to agriculture there was a commitment “to comprehensive negotiations aimed at: substantial improvements in market access; reductions of, with a view to phasing out, all forms of export subsidies; and substantial reductions in trade-distorting domestic support.” Details of the approach to be used (the modalities of an agreement) were supposed to be finalized by the end of March 2003. This was not achieved. Following an extensive series of formal and informal meetings, the Director-General of the WTO, Pascal Lamy, recommended to member countries in July 2006 that “the negotiations (be suspended) across the Round as a whole to enable the serious reflection by participants which was clearly necessary.” The recommendation was accepted. Whether this implies that the Doha round is dead and buried is open to question. It could be resurrected, providing that there is the political will among member countries to make the concessions that will be necessary to reach a final deal. However, it seems virtually impossible that an agreement will be concluded in time for approval by the U.S. Congress before the current trade negotiating authority expires at the end of June 2007. This being so, what does the collapse of the round imply?

First, it is important to note that the commitments already agreed in the Uruguay Round Agreement on Agriculture (AoA) remain in place. Maximum bound levels of tariffs, maximum levels of trade-distorting domestic support (as defined by the Aggregate Measure of Support;

AMS) and the volume and value limitations on export subsidies that are specified in the AoA continue to apply. In terms of these three pillars of the Agreement we can note the following¹:

Domestic support

For the latest three years for which relatively complete information is available (1998-2000), the total AMS reported to the WTO averaged roughly US\$76 billion. Roughly 43 percent of that total or US\$33 billion was associated with meat and livestock products (this includes milk and dairy products and live animals). It should be noted that this dollar figure does not represent the total amount of support provided to livestock farmers in WTO member countries. Product and non product specific support that falls under the *de minimis* provisions is excluded, as is support that falls under the blue and green box categories.⁰ It should also be noted that the actual AMS for most countries in most years is substantially below the maximum permitted level.

Export subsidies

Between 1995 and 2002, an average of US\$5.4 billion dollars was spent by WTO countries each year on export subsidies; 89 percent of the total (US\$4.8 billion) was spent by the European Union. Over that same period an average of US\$3.1 billion dollars was spent on meat and livestock product exports (58 percent of total expenditures).

Market access

The average maximum tariff on agricultural products resulting from the AoA is 63 percent. The highest permitted tariffs apply to tobacco (over 100 percent) and sweeteners (94 percent), but the next highest tariffs are dominated by livestock products. For example, the maximum average permitted tariff on frozen beef, pork or poultry is 90 percent; for dairy products it is 86 percent. Summary data available from the Economic Research Service of USDA indicate that megatariffs (tariffs over 100 percent) are commonly applied to livestock products, particularly by non-OECD countries, and that many countries use tariff-rate quotas (TRQs) to control imports of livestock products.

This brief catalogue indicates that the failure of the Doha negotiations will likely imply that domestic livestock industries in many countries will continue to be relatively highly protected. The phase-out of export subsidies that had been agreed to in principle is unlikely to take place, and since subsidies have been below the maximum permitted levels, these could be increased. Imports under TRQs are unlikely to be expanded and tariffs are unlikely to be reduced. Since many countries use tariffs that are below the maximum bindings, existing tariffs could be increased. Trade-distorting domestic support, which was to be subject to more stringent disciplines, could be increased up to the maximum levels permitted under the AMS.

Since the demand for livestock products tends to expand rapidly as incomes grow, the failure to reduce protection as a result of the collapse of the round could act as a constraint to the future

¹ Figures quoted here are based on information obtained from the websites of the Economic Research Service (USDA) and the WTO.

² Blue box payments are those made under production limiting programs. Green box payments are those that are supposed to have a minimal impact on production and trade.

development of international trade, particularly in middle income developing countries, where the growth in demand is likely to be the greatest in future years.

It may be possible to achieve some expansion of trade in livestock products by reducing protection through bilateral and regional agreements, although in the United States specific negotiating authority would need to be provided to the administration to pursue this strategy after June 2007. Even if that authority were granted, it seems unlikely that bilateral agreements would offer the potential for a significant expansion in livestock trade.

A further issue resulting from the collapse of the Doha negotiations is that the volume of trade disputes and the amount of trade litigation is likely to increase. As already noted, more than one quarter of all WTO trade disputes have involved agricultural products. To put this in perspective we should note that agricultural trade represents less than 10 percent of total world trade. If trade in services is taken into account, WTO data show that agricultural exports represented only 7 percent of the value of world trade in goods and services in 2003. While the Doha negotiations were underway some significant rulings were made on agricultural trade disputes, for example, the cotton case ruling and its implications for the legality of certain aspects of US domestic agricultural policies. Some countries chose not to initiate complaints while the negotiations were underway, but it seems likely that the collapse of the negotiations will see increased activity in this area. Whether this will have particular implications for the US livestock industry is difficult to say, but an increase in litigation could certainly affect the overall climate for the development of agricultural trade. It is also unclear whether the failure of the Doha round will affect pending accessions to the WTO. The most important of which is the accession of the Russian Federation, which has been an important, if erratic market, for US livestock exports in recent years.

Trade and Animal Welfare Issues

In recent years, several trade issues have arisen because of concerns about production methods in agriculture. The dispute between the European Union and the United States over imports of hormone-treated beef and the EU's treatment of genetically-modified products are cases in point. Another set of concerns relates to the way in which animals are raised, transported and slaughtered. Some European countries have been very active in legislating changes in production methods for livestock. The European Union has introduced a number of regulations governing animal welfare standards.

Changes in welfare standards may create additional production and processing costs, although some of these may be modest and there might even be some cost reductions.³ Consumers may be willing to pay a premium for "welfare-friendly" products, thus helping to offset additional costs, although actual experience in this regard is mixed. A recent study of the switch from traditional cage systems for laying hens to alternative systems in the European Union provides some insight into the possible cost implications (Agra CAES, 2004). It concludes that the amount of feed used per kilogram of eggs is significantly higher in free-range and organic systems, compared to traditional cages; more labor is required; and birds kept under these systems have higher mortality rates. As a result, costs per unit are 12 – 20 percent higher.

³ See Farm Foundation (2006) chapter 8 for a more extended discussion of these issues.

If all livestock producers are required to adhere to a particular standard they will all be on an equal basis in terms of competitive position, but this does not mean their competitive position will be unaffected. Product prices will tend to rise as higher costs associated with the standards are passed through to the market. If competing products are less affected, consumers may switch their purchases to those products in response to a change in relative prices. There is considerable potential for substitution among livestock products, so this could have an impact on the market share of individual products and their final prices. If products are exported, an increase in price will lead to a deterioration of competitive position with respect to suppliers in other countries who are not required to meet the standard, i.e., supply non-conforming products.

Producers who operate under the higher standard and have difficulty differentiating their product face particular risks from non-conforming products. Domestic or foreign non-conforming producers may increase their market share at the expense of conforming producers, because they operate at lower costs and can offer lower product prices. It was recognition of this fact that led the European Union to propose an expansion of the set of payments that would be permitted under the green box category, so that the EU could provide payments to producers to offset higher production costs created by animal welfare regulations. The proposal was not favorably received by other WTO member countries, and it was not being promoted by the EU when the negotiations collapsed.

There are no specific provisions dealing with animal welfare in the General Agreement on Tariffs and Trade (GATT) and the associated agreements that underpin the operations of the WTO, although two agreements are relevant to the issue (Gibson, et al., 2001). The Agreement on Technical Barriers to Trade (TBT) deals with the application of product standards in international trade. The Sanitary and Phytosanitary Agreement (SPS) deals with sanitary and phytosanitary measures that may directly or indirectly affect international trade. That agreement is limited to the protection of animal health resulting from the entry, establishment or spread of pests, diseases or disease-causing organisms. It recognizes international standards for animal health and zoonoses, the standards, guidelines and recommendations developed under the auspices of the World Organization for Animal Health (the OIE), which has operated for more than 80 years to minimize the international transmission of animal disease.

Two key principles underlying WTO rules are equality of treatment and non-discrimination. Countries should not be able to discriminate among trading partners nor among products that meet agreed international standards. Hence, technical regulations cannot be applied that create unnecessary barriers to international trade. WTO members are required to ensure that in using technical regulations, imported products are accorded treatment no less favorable than that for "like" products of national origin. Legitimate justifications are the protection of human health or safety, animal or plant life or health, or the environment. Risk assessments must be scientifically based. The agreement requires countries to use international standards, where these exist, as the basis for developing their own standards. As currently drafted the TBT does not cover animal welfare standards.

For the last five years, the OIE has been working to establish international standards for animal welfare. Its mandate was expanded under the SPS agreement. Even though animal welfare is not covered by that agreement, OIE has indicated that its member countries "wished to have guidelines and recommendations to assist them in bilateral negotiations" (OIE, 2003). The United Nations' Food and Agriculture Organization (FAO) has also issued a statement of principle on animal welfare in agriculture.

In May 2005, the International Committee of OIE Member Countries adopted four animal welfare standards covering the transport of animals by land and by sea; the slaughter of animals for human consumption; and the killing of animals for disease control purposes. General principles and a set of parallel guidelines for aquatic animal welfare have also been developed and circulated to OIE member countries for comments. In the guiding principles for the development of these standards, it is recognized that animal welfare involves both scientific assessment and value-based judgments, but that such judgments must be made explicit. It is also recognized that there is an ethical responsibility to ensure that the welfare of animals is protected, but that equivalent outcomes (performance criteria) should be the basis for comparison of standards and guidelines, rather than the systems used (design criteria).

The development of agreed international standards on animal welfare could go some way to addressing concerns over unfair competition from non-conforming products. However, it is an open question as to how far the development of standards through the OIE will proceed, particularly when more complex issues, such those associated with production systems for hogs and poultry are involved. Even if agreement on the issues is possible, it is unlikely that international standards would be set at a level that satisfies the requirements of all countries.

Conclusions

At the very least, the collapse of the Doha Round of WTO negotiations seems likely to slow the movement towards freer trade in agriculture and more open markets for US livestock producers. The impact could be more serious if there is a movement to higher protection for domestic livestock industries around the world and a proliferation of agricultural trade disputes among members of the WTO.

Trade issues relating to methods of production in agriculture are unlikely to disappear, and could well intensify. Some progress can be made on these issues within the existing framework of international law, particularly through the development of mutually agreed product standards. However, there are likely to be continued tensions over methods, such as mandatory labeling, used to differentiate conforming and non-conforming products. While much of the focus at the international level will inevitably tend to be on the actions of governments, the response of the private sector, particularly food distributors and retailers, to perceptions about the importance of issues such as animal welfare and their commercial implications are likely to become increasingly significant for U.S. livestock exporters.

References

Agra CEAS Consulting Ltd. (2004, December). Study on the socio-economic implications of the various systems to keep laying hens. Report prepared for the European Commission. Available at http://www.europa.eu.int/comm/food/animal/welfare/farm/socio_economic_study_en.pdf

The Farm Foundation (2006). The Future of Animal Agriculture in North America. Available at <http://www.farmfoundation.org/>

The OIE's initiatives in animal welfare. (2003). Available at http://www.oie.int/eng/bien_etre/en_introduction.htm

Advancing Farm Animal Welfare and the Canadian Experience: Keys to Successful Cooperation amongst Diverse Groups Above the 49th

Susan Church
Alberta Farm Animal Care (AFAC) Association
Calgary, Alberta, Canada

Introduction

When analyzing the advancement of farm animal welfare in Canada over the past 30 years, the words *'trust, foresight, transparent, non-confrontational, respect, industry-driven, pro-active'* were offered. This is hardly a decisive business plan. Yet these descriptors have enabled the Canadian livestock industry to step-by-step move farm animal welfare forward. They are the mortar for the cornerstones that make up today's Canadian farm animal welfare infrastructure. The cornerstones are:

1. The laws and how they are enforced;
2. The Recommended Codes of Practice for the Care and Handling of Farm Animals;
3. Four provincial farm animal industry groups;
4. Canada's new National Farm Animal Care Council.

This paper will review these four areas and describe the overall situation in Canada.

Overall Situation

Canadian production practices and facilities are very similar to US ones, except for scale. As far as the red meat and livestock market is concerned there is no border, according to Kevin Grier of the George Morris Centre. Demand patterns, he stated in his presentation at the USDA's Agricultural Outlook Forum October 2005, for pork, beef and even chicken are the same. Overall trends are mirror images. With regard to production systems, again they are similar. In both countries hogs are largely three-site systems and cattle are centered on large scale open feedlots and western cow-calf pastures. Large scale packers are located near the feedlots and for beef. Most are American owned. All large scale plants are audited by their US customers.

The broiler, egg laying and dairy industries are controlled by quotas and managed, for the most part, in family-run farms.

Currently in Canada there is a reasonable level of trust by consumers in how animal welfare is handled. They expect that animal handling practices are well in hand.

We are not without those outside the industry demanding greater change, faster change; nor are we without the ripple impact of celebrities making anti-animal agriculture waves in your

country. We, too, must deal with animal neglect and abuse situations that attract media – albeit rarely. And, when considering ‘diverse groups’, we too have diversity within groups and often are challenged just by the diversity within the livestock industry. **Canada’s Four Cornerstones**

1. *The Laws and How They Are Enforced*

In his February 2005 Paper, *Legislation for Animal Welfare Laws in Canada*, Dr. Terry Whiting explores public policy development related to animal welfare. He states; “in any society, the way animals are treated by people reflects a common morality.” Responding to societal concerns is the business of government.” “Regulatory intervention is one expression of the will of the people”.

“A new law results when society decides it is appropriate to surrender some aspect of individual choice and freedom for the benefit of the whole.” “Law is one of society’s responses to communally held values.”

Canada has three federal laws that cover animal care and respond to Canada’s commonly held moral position:

1. Prevention of Cruelty to Animals
2. Humane Handling and Slaughter of Food Animals
3. Humane Transportation of Animals

AFAC has prepared a detailed report entitled *Animal Welfare Laws in Canada*. Charges and conviction rates are included where information was available. The report is available at www.afac.ab.ca.

Prevention of Cruelty to Animals

A section within Canada’s Criminal Code deals with animal neglect and abuse. It was first enacted in 1892 and has not been significantly altered since that inception. It mainly deals with willful intent to cause pain, suffering, neglect or injury. It is mainly enforced across Canada by police officers. Jurisdictions where provincial acts exist have specialized enforcement personnel responsible, the Criminal Code is rarely used. Several recent attempts have been made to move revised cruelty to animals legislation forward in our parliament. To date, this has been unsuccessful.

In Alberta, the **Animal Protection Act** is used. This Act provides mechanisms to relieve animals in distress and to hold negligent owners accountable for their actions. It was just recently revised. Public consultations were held. The livestock industry responded – mainly via Alberta Farm Animal Care (AFAC). And, the industry was consulted throughout the entire process. In Alberta, the department of agriculture actually contracts and pays a provincial humane society, the Alberta SPCA, to enforce the Act in rural Alberta. AFAC meets quarterly with department of agriculture staff and the Alberta SPCA management to work towards consistency of enforcement, a policy of voluntary compliance and address ways to deal promptly with large herd seizures and perpetually livestock border-line poor management situations. We collectively discuss ethical problems on handling low value, malnourished animals.

Dr. Whiting in his January 2005 paper, *It is Meet and Right So to Do. Considerations in the Humane Treatment of Low Value Livestock* said “animal welfare enforcement is an emotive workplace where personal conviction and public opinion come into play. Open discussion of animal welfare issues in livestock production systems can only help clarify and articulate the common morality of Canadians.”

Humane Handling and Slaughter of Food Animals

This was enacted in 1960; two years after the United States passed its Humane Slaughter Act. Canadian Food Inspection Agency (CFIA) inspectors and veterinarians are stationed at every federally registered slaughter establishment to monitor livestock handling and humane killing practices. Some of our provinces have companion legislation enforcing humane practices at our smaller, local meat plants.

Humane Transportation of Animals

Again a product of the 60's, this regulation defines conditions for the humane transport of all animals in Canada by all modes of transport. It prohibits overcrowding, loading and hauling animals unfit to travel and has specific feeding and watering requirements, maximum travel times, minimum rest periods, bedding requirements and more. CFIA enforces the regulation through routine inspections, unannounced site inspections and response to reports of non-compliance. Given its age, the significant change in methods of transport and new science, some parts of this regulation are under review.

Because there is significant movement of live animals both from Canada into the US and from the US to Canada (beef, dairy, sheep, bison, horses and spent hens), the need for better harmonization has been raised. It currently only partially exists for horses coming into Canada meat plants with operational sharing of data.

Two of these three pieces of federal legislation are under Review. Change has not been an automatic process. The livestock industry is concerned about pandering to animal activists and changing to comply with stricter European Union regulations. The industry also questions the consistency of enforcement.

Yet, there is belief that these basic controls are needed. A recent Alberta Beef Producers document, that examines humane transportation, states that we need good regulations to deal with those who do not comply to acceptable humane standards. But, it states, we do not need regulations that impede commerce.

What we do not have in Canada – are the top down directives of the EU controlling production methods. Clearly, the Canadian way in advancing farm animal welfare more closely reflects the US. However, unlike the US we have not been exposed to local state ordinances decreeing prescriptive production practice restrictions.

The Canadian meat processors are influenced to some degree by the American food industry's standards for animal welfare but in most cases, Canadian production methods already met those prescribed by say McDonalds or Burger King. This was due in part to the development of Codes.

2. *Recommended Codes of Practice for the Care and Handling of Farm Animals*

Called the *Codes* they stand today as foundation documents. They were first conceived in the late 70's by a group of foresighted extension researchers, veterinarians, livestock industry leaders and humane society representatives.

The Codes are voluntary guidelines that cover recommended housing and management practices and are intended to encourage farmers, handlers, transporters and processors to adopt, reasonable standards of husbandry. Individual Codes exist for all commercially raised types of livestock. Some Codes have not been revised since the late 80's. Others like the poultry Code was significantly updated in 2002. All did receive public funds to assist with overseeing a consistent process and with printing.

At best, the Codes are 'living' documents that are relatively easy to update (compared to regulations). Currently, they are forming the foundation for new on-farm animal welfare verification programs; they are referenced in some provincial animal care acts and used by the courts as examples of 'generally accepted practices' in animal neglect cases. At their least, they are considered by some as minimum standards, only voluntary, and poorly distributed and communicated to the grassroots.

Some of our national livestock groups have on-farm food safety programs in place and have recognized the value of integrating critical animal care control measures to these programs. The Codes form the back bone of these assessments. They are new. They are being tested, tweaked, and adjusted by the egg layer, pig and chicken industries.

Five years ago a report, funded by AFAC, our Saskatchewan counterpart and the Canadian Council of Grocery Distributors, recommended on-farm verification process as a means to prove to retailers and the public that humane practices are followed. Then it was soundly criticized. Today ... three national livestock groups are moving forward.

In his presentation at the January 2006 Banff Pork Seminar entitled *A Proactive Approach to Animal Welfare*, Dr. Bill Ballentyne, Director of Technical Service, Maple Leaf Pork said, "most other countries have gone the regulatory route. Codes, with a practical audit component, appear to me to be a much-preferred option. But, they do require some focused effort on the part of the industry."

Resistance, of course, to the added expense of on-farm assessment is strong. But, examples continue to surface that point to positive economic results from improved handling, improved environmental conditions, and improved health of the animals.

Canada's Code process is currently under review – not because it is broken – but because we can do it better. The Codes are being assessed by a team of researchers who are comparing them to current science and to standards set in other countries. They are examining new ways to articulate them (the shoulds, the musts).

Drs. Jeff Rushen and Anne Marie de Passille, who lead this team, believe flexible, animal-based standards that assess the state of the animals are needed rather than prescriptive conditions. In a paper for the OIE, they have also called for a smoother integration of animal welfare and food safety standards.

At AFAC's recent Livestock Care Conference, they noted attaining these goals will take some hard work initially, but have potential to pay off not only in terms of animal welfare benefits but also for the economic strength of the livestock industry. "On the production end, there's a danger in becoming fixated on the negative consequences of animal welfare – we think it's going to cost us more, that there will be legislation and regulations and all these difficult things," says Rushen. "But many improvements to animal welfare can be cost effective. I think there are actually going to be a lot of benefits, including economic benefits."

3. *Four Farm Animal Groups*

At a 2002 Canadian Farm Animal Welfare and Codes of Practice Consultation Workshop, Dr. David Fraser, Professor Animal Welfare Program at the University of British Columbia, in reference to the federal government's limited power with respect to farm animal issues, said, "the important players are farmers, truckers, processors veterinarians and farm workers who have the direct care of the animals." He, in his capacity as an international advisor, often points to the industry-driven groups in Canada.

Several years ago, four separate provincial livestock industry groups were formed to work collectively on farm animal care issues. The first to form, the Ontario Farm Animal Council (OFAC) started over 17 years ago. AFAC started in 1993. Farm Animal Council of Saskatchewan (FACS) and Manitoba Farm Animal Council (MFAC), were set up just prior to that.

Our board members come mainly from the major provincial livestock organizations. These diverse groups make active, progressive decisions together, generate ideas and build on the successes and examples set by others at the table.

The benefits gained by having all livestock groups working together on farm animal welfare were articulated in a 2003/Strategic Review completed by AFAC. Member groups pointed to:

1. information sharing amongst groups;
2. understanding of each others' industries (narrowing of the farm-to-farm gap);
3. coordinating efforts and responses on issues that impact the entire sector (we speak with one voice);
4. joint urban (consumer) messaging;
5. keeping the industry in front of issues;
6. securing funds for extension, research, training and pooling resources for projects;
7. liaising with government, politicians and local humane societies;
8. peer pressure for continuous improvement in farm animal care.

Both government staff and politicians recognize the value of having an industry group lead and handle issues and problems.

Our success, if success is measured in the improvement and promotion of responsible animal care, is based on the openness with each other and the willingness to tackle some tough issues. And, it is due to the closed door policy regarding who is at the table. Our boards do not include animal activists as members and limit our interaction with them. This way our time and attention stays focused on our market, those who handle and care for animals.

This paper will use AFAC to demonstrate successful cooperation amongst diverse groups. Its mandate, set down by producers in 1993, is to:

1. advance and promote responsible animal care;
2. engage in discussion with the urban public to generate awareness of farmers' commitment to animal care;
3. monitor and respond to issues and legislation;
4. encourage research.

All of AFAC's operational costs are covered by industry membership or cost-recovery. The organization is entrusted with several other pools of funds for research, extension, training, benchmarking, communication, issue reports and livestock care response.

A positive attitude amongst producers towards farm animal welfare is an absolute essential. Here are some examples of strides made in Alberta to advance animal care.

Well before BSE hit, our industries stood together and declared it is inhumane to load and transport a downed animal. They defined a downer as one that cannot rise or if standing, move without assistance. Our transport regulation was changed as a result. They then set about to benchmark downers with a three year study.

In part because of our relationship with the enforcement arm of the Alberta SPCA, through what we call the Alberta Livestock Protection System, we are able to identify 'what needs fixing'. Unfit or compromised animals going to auction markets and meat plants needed to be fixed. The salvage mentality was strong yet in the minds of a growing number of producers, it was considered unacceptable to market animals in poor or weakened conditions.

The industry set to work, first on its own, defining and drawing a line in the sand regarding what was acceptable. It was clear the industry realized they needed to make these decisions – not have them dictated by those outside the industry. Then veterinarians, inspectors and the enforcement officers were consulted. The results are Humane Handling Guidelines for beef and dairy cattle, sheep and pigs. These booklets are in demand by truckers, inspectors, feedlot owners and vet clinics. Due to demand all have had to be reprinted. This is leading to many improvements and to more animals being euthanized on-farm.

AFAC has a producer-run animal care response line called ALERT. We learned that often a neighbor will hesitate to call the SPCA about a livestock care concern down the road, but will call our confidential line. We first try to lend a helping hand and we participate based on consent of the owner, only. But, we will not hesitate to call the SPCA if we experience intransigence or obvious animal distress.

AFAC's on-call veterinarian reaches out on many occasions, nipping problems in the bud, providing knowledgeable counsel, often at the request of the SPCA officers. He is often the first to insist animals be seized and distress relieved by the SPCA officers. This is an excellent example of cooperation amongst diverse groups. A portion of the funding for the veterinarian position came from the public when Alberta faced severe drought and market depression.

AFAC offers several training programs, presented by a skilled, entrepreneurial former American, Jennifer Woods. They include:

1. Good Livestock Handling Pays;
2. Livestock Handling for Youth
- ;
3. Livestock Handling for Injury Prevention;
4. Livestock Emergency Response (mainly commercial liner roll-overs).

As well, AFAC, using the talents of a Canadian living in the US, Tim O’Byrne, has developed a Quality Livestock Transport (QLT) training program for beef, dairy, pigs, poultry, sheep, horses and bison.

Our research support is focused in five areas:

1. husbandry practices – transportation, handling, capture and euthanasia;
2. livestock health – early detection of sick animals, reduced antibiotic use.
3. painful procedures – dehorning, velveting;
4. housing – environment, space, mobility, enrichment;
5. non-invasive stress measurement.

Our first priority is to respond to the needs of specific industry problems like on-farm spent hen euthanasia, sow stall retrofits, furnished cages, cold weather transport and bison dehorning. We encourage production related research to add components to evaluate stress.

Dr. Temple Grandin told me when I first took on the management of AFAC, “use your researchers; you’ve got some of the best in North America.” We’ve followed her advice and maintain a strong link with several across Canada. As an example, we are signatories to the Alberta/Canada Livestock Welfare Partnership. And, AFAC provides minor support and participates on Dr. Fraser’s UBC Animal Welfare Advisory Committee. Researchers tell us they appreciate the link AFAC provides to industry.

AFAC wouldn’t be doing its job if it wasn’t nudging, suggesting, repeating some key messages over and over. One of our vehicles to accomplish this is **Livestock Welfare INSIGHTS**, researched and written in most part by Jackie Wepruk. It is soon to be distributed by other provinces.

The industry is tackling farm animal welfare. Alberta beef industry has just hired an animal health/animal welfare specialist. The chicken farmers sponsored a conference on broiler welfare research. Cattlemen’s magazine printed a letter about a rancher using lidocaine for dehorning. The Auction Markets Association asked to be a permanent AFAC board member. Our veterinarian was asked to speak at a feedlot cowboy school on handling unfit cattle. A poultry euthanasia project received research funds. The egg industry is looking at furnished cage options. And, Canada has formed a national farm animal care council.

4. Canada’s New National Farm Animal Care Council (NFACC)

Officially launched in August 2005, our new NFACC is building capacity and brings together Canada’s national livestock organizations, the retailers and food service industry, meat processors, veterinarians, federal government and federation of humane societies ... in two official languages! There is certainly diversity at this table. And it’s not without spirited dialogue.

The primary objectives of NFACC are to provide a means for communication and collaboration about common animal care issues of a national concern.

In one year, it has a Business and Funding Plan, a part-time coordinator, recommendations for a renewed Codes of Practice process, concepts in place to work with researchers and receive their expertise and a biweekly update on national and international issues.

One of the immediate issues is to assist in the development of processes required to update the Codes of Practice and to coordinate discussions of Code verification processes. All the groups at the table have a stake in being clear about what the Codes include, in agreeing what an audit process should confirm, and in making the system or process credible to the Canadian consumer.

In the words of Dr. Ballantyne, “there needs to be a process by which concerns can be clarified, options evaluated, alternatives proposed and if accepted, incorporated into a Code. This system needs a clearer mechanism for doing the required research and recommending improvements to animal welfare. The alternative is regulation or loss of markets.”

The National Farm Animal Care Council will act as the coordinating group to create industry positions regarding trade developments. The OIE has started a process of defining animal welfare parameters as part of the WTO agreement. The National Council can act as a facilitator to ensure a reasoned and scientifically based voice is provided by the Canadian food animal industry to the Canadian representatives at such meetings.

NFACC is also partnering in a brand new ‘cooperative’ approach called *Putting Farm Animal Welfare on the Agenda*. This involves the four provincial groups and a significant drive to increase livestock welfare extension and technical transfer of animal welfare research.

Conclusion

Dr. Ballantyne put it well when he said, “In Canada, the food animal industry is given high ratings in consumer studies. There is no on-going issue with animal welfare. Maintaining this consumer attitude and confidence is dependent on the industry participants taking a leadership role and performing in a certain manner. Governments will not do this for us, nor should they be expected to do it for us. If governments must get involved, it will be to regulate. Codes of Practice are a perfectly acceptable alternative in terms of how an industry can choose to set standards by which it operates. However, standards without external monitoring processes, verification or audit are not credible.”

David Fraser in his 2001 address to the Banff Pork Seminar on the *Culture and Agriculture of Animal Production* indicated that sustainable food animal production would require refocused research, leadership from the animal industries and facilitation by government.

This describes the Canadian way – core laws enhanced by industry-driven Codes of Practice standards on-farm animal care assessment to come and a ‘fix what needs fixing’, ‘continually improve’ attitude towards farm animal care.

At the end of the day, good stock people make the biggest impact upon animal well-being and that’s where our momentum is generated.

Panel: Animal Welfare as a Trade Issue

OIE Guidelines

Michael David, Director
National Center for Import and Export
Sanitary International Standards Team
USDA/APHIS Veterinary Services

Introduction

In May of 2000 Member Countries of the World Organization for Animal Health (OIE) voted to give the organization a mandate to address animal welfare issues. Member Countries recognized that the OIE, as the international reference body for animal health and zoonoses, was the international body best placed to provide direction and guidance on animal welfare. Although the actual subject matter of animal welfare is not addressed in the World Trade Organization's (WTO), Sanitary and Phytosanitary (SPS) Agreement, Member Countries agreed that the OIE should develop recommendations that would serve as a framework should they be needed for international negotiations in the trade of animals.

Since that time the OIE has developed a mission statement on animal welfare, established a permanent Working Group on Animal Welfare, and convened several ad hoc groups to address various animal welfare issues. The OIE's mission is "to provide international leadership in animal welfare through the development of science-based standards and guidelines, the provision of expert advice, and the promotion of relevant education and research."

The OIE has recognized that animal welfare is a complex and multi-factorial issue with important scientific, ethical, economic, cultural and political implications. As such, the OIE is acutely aware that any recommendations it proposes need to be grounded on sound science and practical experiences. Their commitment is to develop outcome-based rather than prescriptive guidelines.

In May of 2005, the OIE adopted four new guidelines on animal welfare. These are:

1. Guidelines on the Transport of Terrestrial Animals by Sea
2. Guidelines on the Transport of Terrestrial Animals by Land
3. Guidelines on the Slaughter of Animals
4. Guidelines on Killing for Disease Control

These guidelines provide recommendations for the transport of animals by sea and by land, and recommendations that should be considered when animals are slaughtered for human consumption and when animals are depopulated in the face of a disease outbreak. These four

guidelines were slightly updated in May of 2006, and will likely continue to be revised as new and additional information becomes known.

Two areas specified in these guidelines which require further attention and clarity (and therefore, remain 'under study') are on the procedures for handling fetuses when animals are slaughtered, and on the use of CO₂/air mixtures for killing in disease control situations.

Future guidelines on animal welfare the OIE will next draft are on the transport of fin fish, on the slaughter of fin fish, on stray dog control, on harvesting and culling of wildlife and zoological animals, on the use in testing of laboratory animals, and on the housing and husbandry of terrestrial animals. The initial guidelines on housing and husbandry of terrestrial animals will outline some generic recommendations rather than be specific for a particular species. All these guidelines will be distributed to all OIE Member Countries as draft proposals for comment prior to adoption. Draft "scoping" papers have already been developed for some of these next guidelines.

In addition to its active role in developing recommendations for addressing animal welfare concerns, the OIE, through its Working Group, supports international animal welfare educational activities and seeks to consolidate and further develop relationships with international stakeholders.

Panel: Animal Welfare as a Trade Issue

Animal Welfare Laws and International Trade

Lorraine Mitchell, Economist
Foreign Demand and Competition Branch
USDA, Economic Research Service

The views presented here are those of the author, not the Economic Research Service or those of the USDA. The author would like to thank John Dunmore, Peyton Ferrier, Ken Mathews and Janet Perry for helpful comments and suggestions. All errors are the author's own.

Introduction

Animal welfare regulations have received increasing attention from consumers over the last thirty years. The extent of this attention has varied from country to country, leading to a host of differences in laws, private standards, and consumer behavior. These differences between countries can affect trade between those nations. This paper considers what economic theory tells us about private market reactions to animal welfare concerns, governmental reactions to welfare concerns, and their implications for trade. The paper will then examine what is occurring in practice in each of these areas, culminating in a discussion of the implications for trade.

Economic Theory

Consumer Demand and Supply Responses

If Demand For Meat Produced With High Animal Welfare Standards Is Large Enough, Consumers Are Willing To Pay More.

If consumers prefer to purchase products made with techniques that improve animal welfare, then they will be willing to pay more for those products. The demand curve for animal friendly products should therefore indicate that consumers are willing to pay more for a quantity of the animal friendly good than they are for the same quantity of the conventionally produced version of that good (Blandford and Fulponi, 1999). This demand curve, shifted outward compared to the demand curve for conventionally produced products, will result in higher prices offered and paid for goods produced with what are perceived to be animal friendly techniques. Some retailers may respond to this consumer demand by instituting standards for their suppliers that require the use of techniques that yield higher animal welfare.

Some Welfare Friendly Techniques Cost More

Some animal producers point out that maintaining animal welfare can improve returns for producers, so some practices are already incorporated in standard practice. Some of the techniques that provide animals with greater welfare, however, are more costly. Larger cages for hens require new cages and more space. Free range chickens or meat animals require the

use of outdoor space or grazing land in addition to a sheltered area for the animals (Farm Foundation, 2006). These added costs represent a shift back of the supply curve, indicating that the higher animal welfare version of the good costs more to produce than the conventional version of the good, and the price will therefore be higher (Tacken et al., 2003; Mitchell, 2001, Blandford and Fulponi, 1999).

As Long As Premium Covers Costs, Producers Might Supply The Same Quantity Of The Good

If the higher price that consumers are willing to pay covers the costs of the high animal welfare version of the good, then producers will supply the same amount, but if the shift in demand based on consumers desire for animal welfare is small compared to the shift in costs to suppliers, then producers will supply less, and consumers will buy less of the product.

Alternatively, markets may form for two versions of the good – one produced with techniques perceived to improve animal welfare selling at a higher price and a conventionally produced good selling at a lower price (Farm Foundation, 2006). The production of goods to incorporate standards that reflect consumer preferences is quite common. Consumers have different preferences and different valuations for different characteristics. The market responds to this by producing a variety of goods with these different characteristics (Helpman and Krugman, 1985).

Agricultural products have traditionally been sold in fewer varieties because of the reliance on economies of scale. Shipping products in bulk has proven to reduce costs substantially. An increase in variety of agricultural products increases the need for separating outputs into different types and niche markets, so that some of the savings of bulk shipping and handling are lost (Hobbs, 1995; Blandford and Fulponi, 1999). Consumers' desire for differentiated products needs to come with a sufficient willingness to pay (increased demand) in order to cover these higher costs of production.

Government Regulation

Although market driven solutions to consumer concerns about animal welfare exist, government may also intervene to regulate the market for animal friendly products. This occurs for several reasons.

Consumers Lack Information On Animal Welfare.

Many economists refer to animal welfare as a “credence good”, i.e., there is no way for a consumer to observe whether the good has this characteristic or not (Darby and Karni, 1973; Golan et al., 2000; Caswell and Mojduska, Blandford and Fulponi, 1999; Mitchell, 2001). If consumers believe that they are not purchasing goods with the qualities for which they are paying, they may reduce their consumption below the level of economic activity that they would generate if they had access to all of the information desired (Akerlof, 1970). Producers can label the goods to give information. If consumers are willing to pay more for a good with a given characteristic, then some producer should be willing to provide that good, and identify it in order to gain that premium (Ippolito and Matthias, 1995; Grossman, 1981; Golan et al, 2000). However, firms may not reveal negative information about their products (Golan et al, 2000; Zarkin and Anderson, 1992), and identification might be difficult (Blandford and Fulponi, 1999). Blandford and Fulponi (1999) and the Farm Foundation (2006) note that consumers may lack information about animal welfare, and that third party accreditation of labels can provide consumers with some assurances. Governments may, however, need to regulate the content of

the labels in order to prevent fraud or to achieve a commonly agreed upon definition (Golan et al., 2000). For instance, the US and the EU have legal definitions of the term “free range”. Governments, therefore, generally regulate information provision in markets in order to make certain that consumers are purchasing what they think they are purchasing.

Consumers Don't Consider Social Benefits In Deciding How To Spend Their Money

Another reason why governments may need to pass animal welfare regulations is that consumers don't consider the impact of their consumption on other consumers. If animal welfare is perceived to be a public good, then each animal raised with high welfare standards is valuable to each person who values animal welfare, so one animal preserved benefits many people (Farm Foundation, 2006; Mitchell, 2001; Samuelson, 1969). The market solution only weighs an animal's welfare against the market price, which is what one consumer would be willing to pay for animal welfare. Society as a whole, however, has many people placing a value on that animal, and the sum of what each of those people is willing to pay for that animal's welfare is greater than the amount one consumer is willing to pay (Samuelson, 1969). Thus, society as a whole is willing to pay more for animal welfare than individual consumers are. The market solution will generally spend less on animal welfare and generally results in less animal welfare than society would want (Farm Foundation, 2006; Mitchell, 2001; Samuelson, 1969). The government regulates animal welfare in order to rectify this imbalance. Blandford and Fulponi (1999) note that governments may regulate to achieve animal welfare standards in line with “generally held views.”

Government regulation of animal welfare to balance social costs and benefits might impose costs that are in excess of the premium consumers are willing to pay individually. The government could choose to subsidize producers, who use the more expensive techniques (Blandford and Fulponi, 1999; Bennett, 1997). Alternatively, consumers will pay a high premium, and producers will lose some sales due to the higher prices they must charge to recoup costs. In this way, producers and consumers are “taxed” to fund a social objective. The European Commission, for example, acknowledges that its animal welfare regulations may increase costs to producers by more than the extra premium that consumers are willing to pay (European Commission, 2002).

When Do These Issues Begin to Affect International Trade?

Differences In Regulations Can Lead To The Enactment Of Trade Barriers

If a country enacts animal welfare legislation, mandating that producers use specific animal welfare techniques to produce their products, then there may be trade consequences. If these animal welfare techniques are costly, then the production costs of firms in that country might be higher than those firms from abroad, which could mean that lower cost foreign products might undercut the sales of domestic products (Blandford and Fulponi, 1999; Vogel, 1995, Farm Foundation, 2006; Wilkins et al., 2005; EC, 2002).

If consumers are willing to pay more for the animal welfare friendly products, then these cost differences might not lead to lower sales for the domestic firm if they are offering a good that consumers desire to pay for. As noted above, governments can respond to this by regulating labeling of goods produced with the higher standard of animal welfare (Blandford and Fulponi, 1999). Labeling enables consumers to discern the difference between the two types of the

same good. This will enable producers of the more animal friendly goods to take advantage of the higher consumer willingness to pay.

However, as noted above, consumers often don't take into account the effects of their purchases on others, so the government might mandate a higher level of welfare than the market would. Governments can't regulate the production practices outside of their own borders as they did in the domestic case. In this case, the governments might try to mandate that the imported goods meet the same animal welfare standards as the domestic goods. Domestic producers could align with non-profit organizations supporting animal welfare regulations in order to lobby for these trade restrictions (Vogel, 1995).

Private Standards And/Or Consumer Demand Can Reduce Trade, Even If Government Regulation Does Not

If consumers wish to purchase goods with particular characteristics, it is possible for trade to decline, or even stop, without any government action at all. If consumers wish to purchase goods produced with a particular level of animal welfare, and in particular, if private sector wholesalers and retailers are only willing to purchase goods that meet certain standards, then international trade can decline if exporting countries are not willing or able to meet those standards. The United States, for instance, was unable to export many cars to Japan until the United States began producing cars with a right hand drive, and European cars did not have catalytic converters until manufacturers started adding them in order to comply with US regulations.

Developing countries wishing to export to the country with the higher animal welfare standards might have difficulty meeting either stringent private or public standards if the importing country or firm requires certification, or if the welfare regulations require costly capital investments (Argentina, statement to WTO).

What Is The Impact Of These Differences At The Margin?

Even if differences in regulations and private standards seem to be obstacles to trade, it is possible that the impact of a given regulation on actual trade flows is small. For example, if there are several regulatory differences that hinder trade, altering one set of regulations may have no effect on trade whatsoever (Calvin and Krissoff, 1998).

What Do We See in Practice?

Consumer Demand and Supply Responses

Studies and Surveys

Consumer demand for animal welfare has been receiving increasing attention. Some consumer groups, like People for the Ethical Treatment of Animals (PETA), have been actively lobbying food producers to improve animal welfare in many countries (Francione, 1996; Farm Foundation, 2006) . Attention has been substantial in the EU and the US, but in many other countries, even those without a history of animal welfare legislation, the issue is receiving more attention. In some cases, this is due to increased income and increased information, and in some cases it is due to increased concern about the contribution of crowding in livestock

production to the spread of disease and sanitary conditions that contribute to food safety incidents (Bennet, 1997; Blandford and Fulponi, 1999, 2000; Peoples Daily, 2005; Farm Foundation, 2006; European Commission, 2002).

Several studies and surveys indicate that consumers in the US, Canada, and the EU have a positive willingness to pay for animal welfare. That is, consumers in these countries are willing to pay more for goods perceived to be produced with higher standards of animal welfare. A survey by Bennett (1997) found that British consumers were willing to pay 6-30 percent more for eggs to cover the increased costs of banning battery cages. Bennett and Larson (1996) found that US college students were willing to pay 18 percent more for free range eggs and were willing to pay \$8.00 in taxes to provide funding to improve animal welfare. Hobbs et al (2005), using a competitive auction, found that a sample of Canadian consumers were willing to pay 5 percent more for a pork sandwich if the pork was produced with “humane treatment”, and 9.5 percent more for a similarly produced beef sandwich.

A broad survey of European consumers in 2005 found similar results. A survey of citizens in all 25 EU countries found that 43 percent of consumers thought about animal welfare when purchasing animal products, and 38 percent had purchased free range eggs (Eurobarometer, 2005). Most consumers said that animal welfare did not get enough attention from policymakers, and only 7 percent said it got too much. Twenty-five percent of EU consumers said they would pay five percent more for animal friendly products, 21 percent said 10 percent more, and 11 percent said 25 percent more. For these questions, the percentages of people purchasing or willing to pay higher prices for animal friendly products were higher in the Netherlands, Germany and the Scandinavian countries. Kishida and Macer (2003) note that less attention has been paid to farm animal welfare in Japan.

However, as numerous scholars have pointed out, most of these are surveys or studies that used the contingent valuation method, using surveys to ask people what they would be willing to pay hypothetically. This method often overstates a consumer’s actual willingness to pay as reflected by their true actions at the cash register (Blandford and Fulponi, 1999; Lusk, 2003; Farm Foundation, 2006).

Evidence From Markets

Market prices generally feature a higher price for items produced with advertised animal-friendly techniques in many markets. An informal look at on-line shopping services offered by ten different food retailers in the EU and the US indicates that actual price differences⁰ seem to exist for items produced with what are perceived to be higher animal welfare standards. The retailers² (whatever on-line services the author could find) were not a representative sample of retailers; they included some of the largest retailers in some of the countries, but also some that have a small market share in their respective countries, particularly the US and German on-line services. Attempts were made to find retailers in the US and in larger EU countries plus the

¹ These retail prices cannot be treated the same way as the studies above, since they look only at the price differences paid by the segment of the market that actually buys free range eggs, which could be quite small or quite large, while the studies on willingness to pay above give average figures across all consumers.

² See Appendix A for a list of retailers

Netherlands, which has a retailer that is important globally. Additionally, there is some evidence that on-line grocery shoppers may not be typical of grocery shoppers in general (Fox and Kempik, 2006). Prices were those available in July, 2006, and could depend on the zip code referenced to access the service. While free range eggs are on average more expensive than cage eggs or eggs with unspecified production systems, the two product ranges are somewhat difficult to compare since containers tend to be smaller for free-range eggs. Containers of the same size and number were available only for two retailers in two different EU countries, and in these cases, the premia for free range eggs were positive, but differed in magnitude substantially. Averages for the two US on-line services were within this range for the same type and number of eggs. Most average per-egg premia for free range versus conventional egg containers of different sizes and numbers of eggs were also within this range. For the largest chain in the Netherlands, all eggs offered on-line were free range or organic, which is in keeping with the pledge by retailers there to offer only non-battery cage eggs (Namnews, 2003). The UK Department of the Environment reports that free range eggs sell for almost double the price of conventionally produced eggs (DEFRA, 2006).

Free range meat seems to have a much smaller market, and many stores do not offer free range meats on-line. Many offer organic meats, which generally comes from animals raised with access to the outdoors, but which also have other costly characteristics which can include organic feed, etc. Several of the stores examined did not offer either organic or free-range meats to their on-line customers. Comparing similar cuts and weights of meat, there were one or two instances where organic offerings were cheaper than conventional, but on average, organic or free range meats were more expensive than their conventionally produced counterparts.

These prices tell us what people who buy free range eggs and meat are willing to pay for them, but how many people are there who are actually making these purchases? These goods are still a niche market in many countries. However, the market share of free range eggs in some of the EU and other European countries is very high, as seen in Table 1, reflecting a popularity of some goods produced with what are perceived to be high standards of animal welfare in the EU

Table 1. Market Share of Free Range Eggs

Country	Free-range eggs Percentage
Denmark	25% (Hirsch, 2003)
U.K.	20-34% (BFREPA, 2005); (Hirsch, 2003); (London Independent, 2005); (BEIS, 2005)
Austria	40% (Hirsch, 2003)
Netherlands	45-50 percent barn and aviary production (World Poultry, 2005), Most Dutch supermarkets will only stock free-range eggs
Switzerland	Battery cages banned (United Poultry, 2004)

Do Private Standards Incorporate The Animal Welfare Regulations?

Some private sector retailers set standards for their products that incorporate animal welfare standards (Wilkins et al.; EC, 2002). EUREPGAP standards are a set of good agricultural practice standards for food production. Most major European retailers are members of

EUREPGAP, and they require their suppliers of fruits and vegetables to conform to EUREPGAP standards. EUREPGAP is developing standards for other products as well, including livestock and dairy products. Their current standards for livestock include a base standard for all livestock production and specific standards for farms that keep sheep, pigs, chickens, and cattle, as well as standards for the production of eggs and dairy products.

While most retailers have not yet adopted the EUREPGAP standards for meat, they might do so in the future. Several leading Dutch retailers have pledged to buy only poultry and pork produced to EUREPGAP standards starting January 1, 2007 (Poultry Industry News, 2005; EUREPGAP, 2005). However, Migros, the leading Swiss retailer, has noted that while it would like to adopt EUREPGAP standards for poultry, it has had trouble ensuring that the standards are enforced all along the food chain (Zueblin, 2004).

While most European retailers have not yet adopted EUREPGAP standards, some do have animal welfare standards (Wilkins et al.). A survey of UK retailers by Compassion in World Farming (2001) found that most had a written animal welfare policy. Tesco, the UK's largest retailer states that its "codes ensure compliance with legal requirements and Government welfare recommendations" (Tesco, 2006). Ahold (2006), the Netherlands' largest retailer has its own animal welfare standards, which apply even to meat in processed foods, and notes that national laws are met for all products. Some parts of the EUREPGAP standard are taken from European law, so producers in the EU may already have to abide by their provisions. Retailers may also offer products certified by an animal welfare certification program, of which there are several in the EU (Wilkins et al.).

American retailers have also begun implementing private standards (Wilkins et al; Farm Foundation, 2006). Some retailers are beginning to notice that consumers are concerned about animal welfare, and are beginning to use this as a selling point in their literature and on their websites. Wal-Mart, for instance, notes that it endorses the Food Marketing Institute's³ standards for animal welfare, but it is not clear whether they make suppliers adhere to those standards (Wal-Mart website, 2006). Kroger requires its suppliers to meet the Food Marketing Institute (FMI) guidelines. Safeway has developed its own animal welfare standards, which it requires its suppliers to meet, and PETA, which threatened a boycott of Kroger and Safeway over enforcement of their standards in 2001, has now stated that Safeway has some of the highest animal welfare standards in the retail industry, although animal welfare groups in general are still quite critical of these private standards. PETA has also purchased stock in several of the nation's largest retailers in order to try to push for more humane slaughter conditions for chickens (PETA, 2006). A few non-profit groups, like Humane Farm Animal Care, have their own standards⁴ (Wilkins et al; Farm Foundation, 2006). Suppliers who have obtained these certifications seem to supply mostly specialty markets and restaurants (HFAC, 2006)

Fast food producers, significant purchasers of meat, are also beginning to adopt standards. McDonald's and Burger King have adopted the American Meat Institute's animal slaughter standards (endorsed by the FMI) for their US restaurants (Francione, 1996; Wilkins, et al.). McDonald's is the largest purchaser of beef in the US, and there is some evidence that the

³ The Food Marketing Institute endorses guidelines that have been developed by producer groups (see Farm Foundation, 2006).

⁴ A report by Farm Sanctuary contrasts industry and non-profit standards

pressure from McDonald's has had an effect on other purchasers of meat and meat producers (Grandin, 2005). Enforcement of these private standards depends on the willingness of the retailer or restaurant to require third party audits of their suppliers' compliance as a precondition of sales (Grandin, 2005).

Producers Who Can't Meet This Consumer Demand Or These Standards May Sell To Those Processors That Don't Have Welfare Requirements

While consumer perceptions of retail foods seems to have resulted in larger market shares for products that are perceived to be animal friendly in the EU, not all animal products are purchased directly by the consumer. Processed goods have raw ingredients that are more removed from the consumer. One study finds that 24 percent of Dutch egg production goes into producing processed egg products in the Netherlands, and some of the 53 percent of eggs that are exported go into processed egg products made in the receiving countries (Tacken, et al., 2003). The UK Ministry of Agriculture notes that 40 percent of the cage eggs are sold to caterers and food processing companies.

A study of German and Dutch buyers of egg processors indicated that these purchasers pay little attention to the housing system for hens in deciding where to purchase their eggs; quality (particularly freedom from pathogens) and price were the most important considerations. (Tacken et al., 2003). Even if voluntary regulations are adopted by retailers and fast food restaurants, meat can be sold to those processed food manufacturers that don't have welfare requirements.

Will Bird Flu Render Some Of These Differences Irrelevant?

Many free range poultry producers in Europe have had to alter their production methods, as European governments have demanded that poultry be brought indoors to protect domesticated fowl from contact with wild birds, the vectors of bird flu. Producers in some countries could lose their free range certification if they keep their bird under cover, but other countries have been offering exemptions. One alternative is to raise the chickens in barns and aviaries, a technique that avoids battery cages. This might become the egg production method of choice, with large market shares in the Netherlands already. The competing problems of bird flu and access to the outdoors also suggest that welfare itself is sometimes difficult to discern without careful research into the relative merits of alternatives.

Government Regulation

What Are Governmental Animal Welfare Regulations? Do They Differ From Private Standards?

The EU has very detailed regulations, outlining specifically required space per animal and animal husbandry methods. The EU also has specific legislation for several species of livestock. Australia has formulated fairly detailed codes of practice along with industry, and has incorporated these into national or state law (Australian Gov't, 2005).

The United States and Canada have less detailed regulations and much more general provisions in their animal welfare regulations (Wilkins, et al.). The EU, United States and Canada all have legislation in place requiring humane slaughter and regulating transport of animals (Farm Foundation, 2006). In the United States, the humane slaughter legislation does not apply to poultry. Canada also has provincial animal welfare regulations. In the United

States and Canada, some of the private standards are more specific than US or Canadian legislation. Codes of recommended practice have been developed by producer groups through the Canadian food industry (Farm Foundation, 2006). The United States' Food Marketing Institute has endorsed private standards developed by producer groups⁵ (Farm Foundation, 2006).

Table 2 (see Appendix B) compares animal welfare regulations and private standards in several countries/institutions. There are differences and similarities on a number of issues. It isn't possible to list all animal welfare issues here, we will consider some of the major differences and issues mentioned by animal welfare consumer groups and the literature (Wilkins et al.; Satya, 2005; Farm Foundation, 2006).

Hen cage size receives a great deal of attention. The EU has increased the size of cages for hens to 550 cm, and battery cages (stacks of individual cages) for hens themselves will be banned by 2012 (Wilkins, et al.; Council Directive, 1999). The ban differs from laws of most other countries (see Table 2, Appendix B), where most laws or private standards require 450-550 sq cm per bird. The EUREPGAP draft standards for chickens require that the chicken producer use stocking densities that conform to EU standards, and that birds have the room to stand and stretch their wings. While no minimum cage sizes are included in the standards, some of these behaviors require more space than is often available (between 75 and 144 square inches (Dawkins and Hardie, 1989, quoted in Mench and Swanson, 2000). Most cages in the United States give birds less than 60 square inches of space (Rahn, 2001), and even the new European cage standards are about 86 square inches, which might not allow some of these behaviors.

US humane slaughter regulations do not cover poultry, while EU and Canadian regulations do. The US broiler industry's (National Chicken Council), voluntary guidelines do spell out stunning and killing procedures, noting that birds "should be insensible to pain before killing". EU regulations require stunning before killing (Wilkins et al., 2005). Canadian regulations allow for stunning then killing, stunning which causes death, or rapid decapitation. The Australian code of practice requires stunning before killing.

Tethering pigs and having pregnant sows give birth in crates have also been considered contentious issues by animal welfare groups. EU regulations ban tethers as of 2006, and allow gestation crates (see Wilkins et al., 2005). The Commission is undertaking a study to reduce the use of gestation crates. The US swine industry's voluntary guidelines (National Pork Board) recommend that tethers not be used, and allow the use of crates. The Canadian Food Industry's code of practice for pigs also does not recommend tethers and allows crates of a specified size. Australian codes of practice allow crates and don't mention tethers. All sources note that the pig must be able to lie down comfortably. US Pork Council standards note that restricted movement tends to protect piglets from injury.

The treatment of veal calves, particularly their confinement and diet, has been another source of concern for animal welfare groups. Canadian guidelines permit tethering and allow stalls of 70-

⁵ These include the United Egg Producers' standards for laying hens, the American Meat Institute's Guidelines for Handling and Slaughter, the Pork Board's Swine Care Handbook (National Pork Board), and the Milk and Dairy Cattle Association's DQA standards for cattle.

80 cm wide. Eight hours of light are recommended. The EU has banned confinement pens, tethers (except for feeding), requires stalls to be at least 90 cm wide, and bans stalls after 8 weeks (Wilkins et al., 2005; EC, 1991). Calves must also be fed fiber and not kept in darkness (Wilkins et al.; EC). The Food Marketing Institute in the United States has not yet endorsed veal standards. The American Veal Quality Assurance Program (2006) allows tethering and pens. Australia requires that individual calf pens be at least 2 sq m.

Other Countries

China does not have as much animal welfare legislation as wealthier nations. However, bird flu has led to increased concern about poultry production conditions, and welfare laws are being drafted (People's Daily, 2005). Japan and Taiwan have general animal welfare legislation. Japan's laws note that animals must be killed painlessly (Halverson, 2001). Mexico has animal welfare legislation, including slaughter and transport legislation, but little enforcement (Farm Foundation, 2006).

Labeling

Governments have done some work in regulating labeling of foods for animal welfare concerns. Governments have defined terms like free-range. The UK definition states, "In Free-range systems the birds are housed as described in the barn system above. In addition birds must have continuous daytime access to open runs which are mainly covered with vegetation and with a maximum stocking density of 2,500 birds per hectare." (DEFRA, 2006). The US definition states, "Producers must demonstrate to the Agency that the poultry has been allowed access to the outside." (Food Safety Inspection Service, 2003).

In the EU, the government has some mandated labeling. A study by the British farm Animal Welfare Council notes that the EU requires the labeling of caged eggs, and suggests that labeling can be used to inform consumers about goods produced with particular animal welfare standards (FAWC, 2006). The EU is exploring the possibility of using animal welfare labels and considers them necessary (EC, 2006; EC, 2002)

In other cases, however, there appears to still be some difference between consumer and producer perceptions of terms. The US cooperative United Egg Producers (2006) began labeling eggs produced by producers that met its standards as "Animal Care Certified". The Better Business Bureau asked the UEP to stop using this label in 2004, arguing that the label led consumers to believe that standards for rearing hens were more humane than they are.

What Do These Welfare Regulations Cost?

The exact cost of animal welfare regulations is hard to generalize, as each regulation has a different cost structure. Some estimates of the costs of various regulations have been made. In particular, the cost of producing hens in larger battery cages or in some alternative to battery cages has been examined a great deal. A study done by the EU has found that doing away with battery cages would cause egg production costs to increase by 20 percent (FAS GAIN, 2005; EC, 2002). Tacken et al. (2003) found that improved "enriched cages" with perches increased costs of egg production over battery cages by 13 percent, and free range systems increased costs by 21 percent. Blandford and Fulponi (1999, 2000) cite several studies that indicate that costs of various welfare regulations could increase costs by 5-17 percent, but also note that one study indicates that animal welfare provisions would increase consumer food bills

by 0.25 percent. The Farm Foundation (2006) cites a number of studies considering costs of animal welfare regulations.

Will This Become an Issue for US Exports?

Do Regulations Differ Across Countries?

Clearly, the previous section indicates that animal welfare regulations differ across countries, but less so with the United States' main trading partners. US and EU regulations differ on a number of points, particularly as the US regulations are less detailed than the EU regulations. Firms meeting US regulations in production might not meet EU regulations. However, the less detailed legislation in Japan and Mexico means that US firms would have a less difficult time complying with requirements in these countries. The United States and Canada have fairly similar regimes.

Do Private Standards Differ Across Countries?

Private standards seem to differ less markedly, as private standards commonly referenced in the United States are more detailed than US legislation. They do still differ on a number of points. US and Canadian private standards differ from EU legislation on hen cage sizes and all three differ on production practices for veal calves. US and Canadian standards also differ on farrowing crates and veal calf production.

What Is The Marginal Impact Of Animal Welfare Standards On US Trade?

The United States doesn't currently export very much meat to the EU, as other phytosanitary disputes, including hormone treatment of beef cattle, slaughterhouse design, and poultry sanitation, in addition to price competition from other countries, have already substantially reduced trade (FAS, 2005c). The United States does sell some meat to Eastern Europe, and when those countries are fully integrated into the EU (i.e. adopt all of its laws) there could be some impact. Thus the marginal impact of differences in animal welfare legislation might not be large, due to major differences in other regulatory areas.

Most of US meat sales are to NAFTA partners or to Japan or Hong Kong, as seen in Table 3. Most of these export markets seem to have legislation that is less stringent or less specific than US legislation or private standards. Canadian private standards do have differences from US private and public standards. However, this does not seem to have affected meat trade. US meat exports to Canada remain large (Foreign Agricultural Service, 2005b).

Table 3. US Meat Sales

Importers of >100 Million in US Fresh or Frozen Pork, 2004	Importers of >100 Million in US Fresh or Frozen Poultry, 2004	Importers of >100 Million in US Fresh Beef, 2004
Japan	Russia	Mexico
Mexico	Mexico	
Canada	Canada	
	Hong Kong	

Source: World Trade Atlas, 2006

Will Countries Apply Animal Welfare Standards To Imports?

The EU has stated that animal welfare requirements will not be applied to imports (Lamy, 2000; UK Parliament). The British Farm Animal Welfare Council has proposed a differentiated tariff system for goods produced according to EU standards, but the EU government has indicated that it does not think that discrimination in imports along animal welfare lines would survive a challenge in the WTO. The EU is attempting to incorporate animal welfare provisions into the bilateral veterinary agreements for meat imports that it has with some countries, and is currently negotiating such agreements with Canada and Chile (EC, 2006; EC, 2002).

The major countries from which the EU does import meat include Argentina, Brazil, Australia, New Zealand, Poland and Hungary. Poland and Hungary will eventually have to meet the EU's standards as members. Some argue that Brazil's meat packers currently meet the EU's standards, while there is other evidence that they do not (Achterbosch, 2006; UK Parliament, 2002; Farmers' Weekly, 2006). Argentina has expressed concern about the possibility of having to meet developed country animal welfare standards (WTO, 2000). The outcomes for these developing countries will probably depend on whether the EU retailers adopt EU law as part of their array of private standards, and whether developing countries will receive payments for their goods that are high enough to cover the costs of certification.

The United States actually does apply one animal welfare standard to imports. The Federal Meat Inspection Act requires that imports of meat only include meat from animals slaughtered in accordance with the US Humane Slaughter Act of 1958. Humane slaughter methods are a part of the audits that the United States conducts of foreign firms (FSIS Foreign Audit Reports, various years).

WTO Dolphin Case Suggest That WTO Regards Countries As Having Limited Interest In Resources Beyond Borders (Welfare of Animals in Other Countries)

In the WTO Dolphin-Tuna Case, Mexico sued the United States for not allowing imports of Mexican tuna, which was caught with methods that harmed dolphins. The WTO ruled against the United States. The United States had claimed an interest in protecting dolphins in international waters, but the WTO said that the United States did not have standing to protect dolphins in international waters from fishermen from another country (see Blandford and Fulponi, 1999, Golan et al 2000; Vogel, 1995). Using this same logic, it is probable that the WTO would rule against a ban on importing goods because of the production techniques used. A country passing such a ban probably would not be able to convince the WTO that it had a compelling interest in the welfare of animals in a third country (Blandford and Fulponi, 1999).

The WTO did rule, however, that the United States could mandate labeling for tuna caught with dolphin unfriendly methods (Vogel, 1995). Presumably, European nations could label their animal products with an indication that they are or are not produced with certain production methods, like battery cages, barns, or open air for chickens and eggs. These measures are simply consumer information measures. This would enable consumers to purchase goods with the desired characteristics, even if the government could not ban imports of the goods to create the public good of animal welfare.

In the Dolphin-Tuna case, the WTO also ruled that countries could enter into binding agreements, like international environmental agreements, in which countries voluntarily give up some of their rights to achieve a certain goal, such as preservation of the international commons (Blandford and Fulponi, 1999; Vogel, 1995). The EU has certainly attempted to move in this direction by attempting to interest other countries in a worldwide dialogue or agreement on animal welfare (EC, 2006; Lamy, 2000).

Private Standards Might Have A Greater Impact

Currently, private standards are not quite points of contention, but they could become so in the future, as more grocery store chains adopt them. More stores in the United States and EU are adopting private standards, so exporting meat to the EU might eventually require attempts to recognize or harmonize private standards. As we have seen, private animal welfare standards across countries do differ in some

areas, although in other areas, there is a fair amount of agreement. For example, US law is silent on tethering pigs, but if a producer follows the FMI Guidelines, which recommendation against tethering, it is in compliance with the EU ban on tethering and the private EUREPGAP specification of no tethering. If a firm can meet FMI standards to sell to Safeway, it might be easier to adopt the practices necessary for EUREPGAP or EU standards, but if a firm just meets minimum US legal standards, then meeting EU standards will be more difficult. Canadian and US private standards do differ on a number of points, but it is not clear who is adopting the private standards in Canada. However, as noted above, some food processors don't have the same animal welfare standards as retailers, and firms which don't meet retailer standards could potentially sell to processors.

Will Some Countries Subsidize? If So, Will Countries Without Subsidies Be At A Disadvantage In Meeting Private Standards?

A study done by the British Farm Animal Welfare Council suggests that subsidies to farmers producing according to EU standards of welfare would be possible, and argues that such subsidies would fall under the "Green Box", which are lump sum payments designed to achieve social or environmental objectives, and which are not limited by international agreements on trade (Farm Animal Welfare Council, 2006). The European Commission (EC) is considering the possibility of offering compensation to its farmers for meeting animal welfare provisions, but remains concerned about whether such payments would be regarded by other countries as non-distorting or "Green Box" payments (EC, 2002). Blandford and Fulponi (1999) suggest compensation as an equitable way to bear the costs of higher animal welfare. The EC would like to see the Green Box amended to allow these payments (UK Parliament, 2002b; Lamy, 2000; European Commission, 2002).

Conclusions

Economic theory suggests that if consumers value animal welfare, we should see new markets developing for goods produced with techniques perceived to be friendly to animals, and such markets are evident in some countries. Economic theory also suggests that some societies might not be satisfied with the level of animal welfare obtained by the market, and in these cases, the government will regulate animal welfare. Differences in regulations and standards can become trade issues.

Animal welfare standards differ across countries and between public and private standards. The United States' major meat export markets do not have very detailed animal welfare legislation, with the exception of Canada. The EU and the United States differ on a number of different issues. The United States does not export a great deal of meat to the EU, and EU legislation will probably not be applied to meat imports, although they may be incorporated into bilateral agreements. If private standards referring to EU legislation are adopted by importers, differences between US standards and EU standards might make it difficult to export to the EU for both the US and other countries. Food processors, however, seem less likely to adopt these private standards than retailers.

Bibliography

1. Ahold website, Animal Welfare, <http://www.ahold.com/page/686.aspx>, 2006.
2. Achterbosch, Thom, "Animal Welfare in the Market", presented at the EU Animal Welfare Conference, March, 2006.
3. Akerlof, George A., 1970. "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism.": *Quarterly Journal of Economics* , Vol 84, pp. 488-500.
4. Australian Department of Agriculture, Fisheries and Forestry, Australian Animal Welfare Strategy, 2006.

5. BEIS, "Egg Production", www.britegg.co.uk, 2005.
6. Bennett, R.M., "Farm Animal Welfare and Food Policy", *Food Policy*, vol. 22, No. 4, 1997, pp. 281-288.
7. Bennett, Richard, and Larson, Douglas, "Contingent Valuation of the Perceived Benefits of Farm Animal Welfare Legislation: An exploratory Survey", *Journal of Agricultural Economics*, Vol. 47, No. 2, 1996, pp. 224-235.
8. Blandford, David and Fulponi, Linda, "Emerging Public Concerns in Agriculture: Domestic Policies and International Trade Commitments", *European Review of Agricultural Economics*, Vol 26, No. 3, 1999, pp. 409-424.
9. Blandford, David and Fulponi, Linda, conference presentation, Symposium on Global Food Trade and Consumer Demand for Quality, IATRC, June 26-27, 2000.
10. BFREPA (British Free Range Egg Producers Association), August 23, 2005. "Oversupply Blights Free Range Markets".
11. Calvin, Linda and Barry Krissoff, "Technical Barriers to Trade: A Case Study of Phytosanitary Barriers and US-Japanese Apple Trade," *Journal of Agricultural and Resource Economics*, Vol 23, No. 2, 1998. pp 351-366.
12. Caswell, Julie A. and Elena Mojduszka. "Using Information Labeling to Influence the Market for Quality in Food Products," *American Journal of Agricultural Economics*, Vol. 78, No. 5, December, 1996. pp. 1248-53.
13. Compassion in World Farming, "Supermarkets and Farm Animal Welfare Standards," 2001.
14. Council Directive 91/629/EC laying down minimum standards for the protection of calves.
15. Council Directive 93/119/EC of 22 December 1993 on the Protection of Animals at the time of slaughter or killing.
16. Council Directive 1999/74/EC of 19 July 1999 laying down minimum standards for the protection of laying hens.
17. Council Directive 2001/88/EC of 23 October 2001 amending Directive 91/630/EEC laying down minimum standards for the protection of pigs.
18. Council Directive 2001/93/EC of 9 November 2001 amending Directive 91/630/EEC laying down minimum standards for the protection of pigs.
19. CSIRO, Model Codes of Practice for Animal Welfare, various.
20. Darby, Michael and Edi Karni, "Free Competition and the Optimal Amount of Fraud," *Journal of Law and Economics*, Vol 16, No 1, April 1973.
21. DEFRA, Eggs and Poultry, Frequently Asked Questions, February 2006.
22. EUREPGAP, "Control Points and Compliance Criteria, Integrated Farm Assurance," March, 2005.
23. Eurobarometer, "Attitudes of Consumers Towards the Welfare of Farmed Animals," European Commission, June, 2005.

24. European Commission, "Commission Working Document on a Community Action Plan on the Protection and Welfare of Animals 2006-2010," SEC(2006)65, Brussels, January 23, 2006.
25. European Commission, "Communication from the Commission to the Council and the European Parliament on Animal Welfare Legislation on Farmed Animals from Third Countries and Implications for the EU," November 18, 2002.
26. Farm Animal Welfare Council, "Report on Welfare Labeling," June, 2006.
27. Farm Foundation. "Future of Animal Agriculture in North America," April 18, 2006.
28. Farmers Weekly, February 24, 2006. "South American Problems Bode Well for UK Beef".
29. Foreign Agricultural Service, "Abolition of Battery Cages to Cost 354 million Euros to EU-25 Egg Producers," GAIN Report E5065, 2005.
30. Foreign Agricultural Service, "Canada – Livestock and Products Annual, 2005," GAIN Report CA5056, 2005b
31. Foreign Agricultural Service, "US beef Faces Strong Competition on the European Market," GAIN Report E35178, 2005c
32. Food Safety Inspection Service, Foreign Audit Reports, various years.
33. Fox, Mark A. and Mike Kempiak. "On-line Grocery Shopping: Consumer Motives, concerns, and Business Models", *First Monday*, July 2006.
34. Francione, Gary L., Rain without Thunder: the Ideology of the Animal Rights Movement, Temple University Press, Philadelphia, 1996.
35. Golan Elise, Kuchler, Fred and Mitchell, Lorraine, "The Economics of Labeling," Agricultural Economic Report No. 793, USDA-ERS, 2000.
36. Grandin, Temple. "Special Report: Maintenance of good animal welfare standards in beef slaughter plants by use of auditing programs," *Journal of the American Veterinary Medical Association*, 2005, Vol. 226, pp 370-373.
37. Grossman, Sanford J. 1981. "The Informational Role of Warranties and Private Disclosure About Product Quality." *Journal of Law and Economics*, Vol. 24, No. 3, December), pp.461-483.
38. Halverson, Marlene. "Farm Animal Health and Well-Being," Report to Minnesota Planning Agency, 2001.
39. Helpman, Elhanan and Paul Krugman. *Market Structure and Foreign Trade*, MIT Press, Cambridge MA, 1985.
40. Hirsch, Veronica. "Legal Protections of the Domestic Chicken in the United States and Europe," Animal Legal and Historical Center, 2003.
41. Hobbs, Jill E., DeeVon Bailey, David Dickinson and Morteza Hagiri. The Traceability in the Canadian Red Meat Sector: *Do Consumers Care?* *Canadian J. Of Ag. Econ.*, v53, #1 (3/05).
42. Hobbs, Jill E., "Evolving Marketing Channels for Beef and Lamb in the United Kingdom—A Transaction Cost Approach", *Journal of International Agribusiness and Marketing*, 1995, Vol. 7, No. 4, pp. 15 - 39.

43. Humane Farm Animal Care website, <http://www.certifiedhumane.com/where.asp>, 2006.
44. Ippolito, Pauline M. and Alan D. Mathios. 1995. "Information and Advertising: The Case of Fat Consumption in the United States", *American Economic Review*, Vol. 85 pp. 132-156.
45. Kishida, Sakae, and Darryl Macer, "People's Views on Farm Animal Welfare in Japan," paper presented at UNESCO conference, 2003.
46. Lamy, Pascal, Internet Chat, April 5, 2000.
47. London Independent, "Eggs: Battery or Free range?" April 4, 2006.
48. Lusk, Jayson L. "Effects of Cheap Talk on Willingness to Pay for Golden Rice," *American Journal of Agricultural Economics*, Vol. 85, No. 4, November 2003, pp. 840-856.
49. Mench, J.C., and J.C. Swanson. "Developing Science-based Animal Welfare Guidelines," presentation, Poultry Symposium and Egg Processing Workshop, 2000.
50. Mitchell, Lorraine. "Impact of Consumer Demand for Animal Welfare in Global Trade," in "Changing Structure of Global Food Consumption and Trade," ed. Anita Regmi, USDA-ERS, WRS01-1, May 2001.
51. Namnews. "Netherlands Supermarkets to Ban Battery Eggs from 2004," June 9, 2003.
52. National Chicken Council Animal Welfare Guidelines, 2005.
53. National Pork Board, "Swine Care Handbook,"
54. People's Daily, "China Drafts, Revises Laws to Safeguard Animal Welfare," November 4, 2005.
55. People for the Ethical Treatment of Animals Media Center, <http://www.peta.org/mc/NewsItem.asp?id=8580> July 7 2006.
56. Poultry Industry News, "Quality Programmes Go International," November 24, 2005
57. Rahn, Allan P., "Caged Laying Hen Well-being: An Economic Perspective, presented at North Central Avian Disease Conference, September 30, 2001.
58. Samuelson, Paul. "Contrast Between Welfare Conditions for Joint Supply and Public Goods," *Review of Economics and Statistics*, February, 1969.
59. Satya, "Compassion Conquering World Farming," June, 2005.
60. Tacken, GML, G Cotteleer, and P.L.M. Van Horne, "The Future of the Dutch Egg Processing Industry," LEI Research Report, 2003.
61. Tesco Farming website, <http://www.tescofarming.com/cop1.php>, 2006.
62. United Egg Producers, "Animal Husbandry Guidelines for US Laying Hens," 2006 Edition
63. UK Parliament. Select Committee on Environment, Food and Rural Affairs, Thirteenth Report, March, 2002

64. UK Parliament. Select Committee on Environment, Food and Rural Affairs, Minutes of Evidence, January 23, 2002b.
65. United Poultry Concerns, "How Switzerland Got Rid of Battery Hen Cages," February 17, 2004.
66. Veal Quality Assurance Program website, "Industry Information: Frequently Asked Questions," <http://www.vealfarm.com/industry-info/faqs.asp>, 2006.
67. Vogel, David, *Trading Up*, Harvard University Press, Cambridge, 1995.
68. Wal-Mart website, accessed July, 2006.
69. Wilkins, D.B., C. Houseman, R. Allan, M.C. Appleby, D. Peeling and P. Stevenson, "Animal Welfare and the Role of Non-governmental organizations,". Scientific and Technical Review of the OIE, Vol. 24, No.2.
70. World Poultry, "Dutch Egg Producers Adapt," vol 21, no. 3, 2005.
71. WTO, Third Special Session by the Committee on Agriculture, 28-29 September, 2000, Statement by Argentina, G/AG/NG/W/39.
72. Zarkin, Gary A. and Anderson, Donald W., "Consumer and Producer Responses to Nutrition Label Changes," *American Journal of Agricultural Economics*, December, 1992, pp. 1202-1207.
73. Zueblin, Johannes, "Moving the Poultry Industry Toward EUREPGAP," presentation, IFA Conference, Amsterdam, November 10, 2004.

Appendix A

List of Retailers

On-line Grocery Services Observed

US

- * Peapod: <http://www.peapod.com/>
- * Fresh Direct: http://www.freshdirect.com/site_access/site_access.jsp

EU

- * AHOLD – Netherlands: <http://www.ah.nl/>
- * ASDA – United Kingdom: http://www.asda.com/asda_shop/
- * Carrefour – France: <http://www.ooshop.fr/>
- * Carrefour – Spain: http://www.carrefour.es/compras_internet/alimentacion.html
- * Coop-Italia – Italy
- * Tengelmann – Germany: <http://www.kaisers.biz/lieferservice/index.php3>
- * TESCO – United Kingdom
<http://www.tesco.com/superstore/frames/default.asp?buttons=&url=/superstore/frames/main.asp>

Appendix B

Table 2. Comparison of Animal Welfare Regulations and Private Standards.

The sources are various regulations, including: Council Directives 1991, 1993, 1999, 2001, 2001.

Method	US Law	EU Law	FMI Standards	EUREPGAP Standards	Canadian Producer Standards
Hen cage size	----	550 sq cm, banned after 2012	432-554 sq cm	Refers to EU Law	450 cm sq.
Debeaking	----	Allowed under 10 days	Allowed under 10 days	Allowed under 21 dasy	“Ideally before 14 days”
Inspections per day (chickens)	----	Once	----	Twice	Twice
Farrowing crates (sows)	----	Allowed	Allowed		Allowed, 2.4m x 50cm x 1m
Tail docking (pigs)	----	Only if proven necessary	Allowed while young	Within 7 days of birth	Avoid, but if necessary with 24 hours or first week
Tethering	----	Banned	Not recommended		Not recommended
Tooth grinding (pigs)	----	Only if proven necessary	Within 24 hrs of birth	Within 7 days of birth	Within 24 hours
Castration (pigs)	----	Method restricted	Within 7 days of birth or with anesthetic	Within 7 days of birth or with anesthetic	Within 2 weeks of birth
Inspections (pig)	----		Once a day	Once a day	Sows and piglets- twice per day
Pen sizes (veal calves)		90cm wide, banned after 8 weeks	----		70-80 cm wide
Tethers		Banned	----		Allowed
Transport – cattle (550 kg)		1.3-1.6 sq m	1.38 sq m	----	1.3 sq m
Ramp floor	Non-slip (beef and pork only)	Non-slip	Less than 3% slip, flooring specified	----	Cleats should be provided, surfaces not slick
Shocking	Used as little as possible; max 50 volts	Only 2 seconds	<25 percent shocked	----	Canadian law- Prohibited on certain areas of the body; private standards – minimized

Dragging	Banned (does not include poultry)	Banned	Banned	----	Injured animals should not be unloaded
Fed at slaughter	Every 24 hrs (does not include poultry)	Every 12 hrs		----	Every 24 hours
Stunning	Must be “rendered insensible” before slaughter (does not include poultry)	Required	95% stunned on first try (cattle)	----	Canadian law- must be rendered unconscious immediately or killed immediately by whatever renders them unconscious or by rapid decapitation

Panel: Animal Welfare as a Trade Issue

Industry Perspective

Kay Johnson, Executive Vice President
Animal Agriculture Alliance
1501 Wilson Boulevard, Suite 1100
Arlington, Virginia 22209

See Power Point Presentation

Panel: Animal Welfare as a Trade Issue

Animal Welfare and Trade Capacity Building

Marta M. Prado, Special Counsel for International Trade Policy
Jordan D. Taylor, Deputy Counsel for International Trade Policy
Jennifer Lanier, Director for Scientific Programs
Humane Society International

Introduction

One way in which animal welfare can be improved through international trade and free trade agreements is to build the capacity of developing countries to better compete domestically, regionally, and in the global economy by adopting high animal welfare standards. Through several Trade Capacity Building (TCB) projects that seek to improve animal handling, transport and slaughter, Humane Society International (HSI) has worked with livestock producers throughout Central America over the past three-plus years to demonstrate the positive impact high animal welfare can have on their bottom line. Increasing animal welfare not only improves production, but also increases the ability of livestock producers in the region to meet industry standards in their own country, as well as to reach growing niche export markets for humane products in developed countries.

The proliferation of free trade agreement negotiations undertaken by the United States with developing countries in Central and South America has put the issue of animal welfare at the forefront of the livestock and poultry industries in these countries. This is because the U.S. typically has higher health and safety standards for animal products than its free trade agreement counterparts. Under these agreements exports from Latin America will need to come into compliance with the U.S. sanitary and phytosanitary standards and regulations before they will be allowed to enter the United States.

In Latin America, however, the standards and regulations required of animal product exports are fast becoming viewed as a trade barrier. In particular, where a developing country is unable to raise, transport and slaughter an animal in accordance with the regulations of a potential export market (e.g., the U.S. or the EU), they cannot sell their product in that country.

Even within the developing world, animal welfare can be a potential trade barrier. Where a multinational corporation operating in a developing country has stricter animal welfare standards than the domestic country requires, the policy can become a barrier to local producers who do not meet the corporation's standards. The corporation may then source products from neighboring countries to the disadvantage of local producers.

This paper will seek to first clarify and define those programs that qualify as TCB in the United States, and which agencies and organizations provide funding for TCB initiatives. Second, the changing perspectives of animal welfare and their implication on trade will be outlined. Third, the paper will examine how TCB can be linked to animal welfare in practice. Finally, the paper will conclude by looking at examples of HSI's experience with TCB programs.

TCB Funding in the United States

In 2005, a U.S. Government Accountability Office (GAO) report categorized TCB in the United States as “assistance meant to help countries become aware of and accede to the World Trade Organization (WTO); implement its agreements; and build the physical, human, and institutional capacity to benefit more broadly from a rules-based trading system trade.” The GAO report, however, also noted that TCB in the United States is “primarily a collection of existing activities placed under the umbrella of trade capacity building by a U.S. government survey.” The United States Agency for International Development (USAID) has itself defined TCB as programs which help to “build the necessary capacity for developing countries to take advantage of open markets.”

A more narrow definition of TCB, however, was put forth by the Organization for Economic Cooperation and Development (OECD), which found that TCB programs should enhance “the ability of policy makers, enterprises and civil society in developing countries” to establish a trade policy process that can set agendas and identify objectives; increase the volume and value, and diversify exports and export markets; and increase participation and benefits from the global trading system. Furthermore, the OECD found that TCB programs in developing countries must focus on acquiring the necessary knowledge, skills, and access to capital in order to develop competitive export markets.

The Doha Declaration, which spurred the latest round of WTO negotiations in 2001, recognized TCB as critical for developing countries to further their integration into the multilateral trading system. The Declaration, however, also recognized that no single donor country or agency could meet all the needs of every developing country interested in becoming more integrated into the global economy. For this reason, the Declaration noted that additional partners would have to be incorporated to assist WTO Member governments to provide TCB to all those who requested assistance.

Here in the United States, Congress has remained supportive of TCB programs, finding them to be “critical elements of development assistance because of their large multiplier effects on economic growth, poverty reduction and promotion of the rule of law.” In addition, Congress also trumpeted the ability of TCB programs to help developing countries participate in and benefit from the global economy, and to promote economic growth providing resources to support social investments and reduce dependency on foreign aid.

However, a 2006 Report by the U.S. House of Representatives Committee on Appropriations requested that USAID prioritize its budget to focus on the building of trading capacity in developing countries that have preferential or free trade agreements with the United States. In particular, the Committee asked USAID to focus on certain TCB programs such as those providing training for government officials including customs officers, environmental analysts, and food safety inspectors, as well as those programs intended to improve outreach to civil society and the private sector

From the period of 2001 through 2004, the GAO found that 18 separate Federal agencies in the United States reported expenditures of almost \$2.9 billion on TCB related activities. Of the 18 agencies, USAID reported providing the greatest amount of funding at 71 percent of total TCB expenditures. The GAO concluded in 2005, however, that the agencies were “not systematically monitoring or measuring the results of their trade capacity building activities or

evaluating its effectiveness in terms of building trade capacity.” In addition, the GAO found that the main challenge related to U.S. TCB programs is that they cover “multiple categories of assistance across numerous types of trade and development programs that have many goals and are implemented by multiple agencies.” Furthermore, in 2002 Congress made the following finding:

it has become apparent that USAID lacks a clearly defined, coherent, annual trade capacity building budget process aligned with key officials who are empowered to coordinate and approve agency programs. Increasingly, it is imperative that these programs be consistent and responsive to the demands of developing countries and other U.S. Government agencies. At present, the USAID is unable to effectively meet these demands.

Of the total amount of TCB funding allotted from 2001 through 2004, 12 percent went to programs supporting agricultural development. The GAO defined these activities as those that are intended “[t]o support trade-related aspects of agriculture and agribusiness, excluding WTO agreements.” Pursuant to USAID’s 2003 strategy entitled *Building Trade Capacity in the Developing World*, the agency is now focusing on ongoing programs aimed at helping countries participate in and implement free trade agreements and to take full advantage of trading opportunities. In conjunction with USAID, the U.S. Department of Agriculture has emphasized the promotion of scientific and rules-based regulatory frameworks for agricultural trade in its TCB efforts. This includes promoting increased understanding of biotechnology related agriculture and expanding trade in safe food products associated with biotechnology.

Finally, the Trade Act of 2002 specifically stated that the negotiating objectives of the U.S. should stress the strengthening of the capacity of U.S. trading partners to engage in bilateral trade and to protect the environment. In order to further this objective, the Office of the United States Trade Representative (USTR) has been coordinating TCB activities with USAID, other U.S. federal agencies, international and regional banks, and the private sector with the specific intent to further facilitate economic integration with Free Trade Agreement (FTAs) partners of the United States.

Changing Perceptions of Animal Welfare and Trade

Society as a whole and particularly consumers of animal products, have increasingly expected producers and governments to take into consideration the welfare of animals. This is evidenced by the World Animal Health Organization’s (OIE) development of strong animal welfare criteria and expectations for animal care. Recognizing that the WTO Sanitary and Phytosanitary Agreement did not address animal welfare, OIE Member Countries asked the organization to assist in the development of guidelines and recommendations that would help them to further international negotiations on the issue.

Following the initial push by its Members, the OIE convened a group of animal welfare experts whose ultimate recommendations on animal welfare were unanimously adopted by the Member Countries and resulted in the establishment of a permanent Working Group in late 2002. In particular, the OIE has focused on the welfare of animals in the agriculture and aquaculture

industries with specific attention paid to the issues of transportation, humane slaughter, and killing for the purpose of disease control for inclusion in the OIE *Terrestrial Animal Health Code*. As the Working Group continues its work on animal welfare, the OIE has remained vigilant in its effort to involve all relevant stakeholders and, therefore, has formed and maintained relationships with various non-governmental organizations, academia, researchers, and the food industry in order to ensure that best practices are taken into consideration.

In addition to OIE, other international lending organizations such as the International Finance Corporation (IFC) of the World Bank Group have supported increased animal welfare standards. The IFC, whose mission is to promote sustainable development in the private sectors of developing countries, promotes increased animal welfare as important to stem the suffering of animals. For commercial reasons, the IFC also acknowledges that higher welfare increases the sustainability of businesses and addresses society's expectations of how animals should be treated. In particular, the IFC found that high animal welfare standards can enable businesses to increase efficiency and profitability, meet consumer demands, and comply with domestic and international markets.

Individual countries are also passing legislation and writing regulations that address welfare concerns, and corporate policies are increasingly being enacted to provide structured guidelines on how animals are to be treated. For example, in 1997, the European Union passed a legally binding Protocol on Improved Animal Protection stipulating that animals are sentient beings, defined in Webster's Dictionary as "responsive to or conscious of sense impressions; finely sensitive in perception or feeling." Costa Rica has also created a law stating that each animal must have the "possibility of developing according to its normal patterns of behavior." This means that in Costa Rica pigs are to be kept in conditions that allow them to build a "nest" before giving birth, turn around in their pens, and generally engage in their natural behaviors. Furthermore, numerous countries around the world have regulations requiring humane slaughter of food animals.

Complementing the animal welfare initiatives taken on by these governments are several international corporations such as McDonald's that have put in place strict animal welfare standards to which their suppliers must adhere, and which are subject to audit. With respect to corporate participation in developing countries, the IFC has found that "many parts of the international food supply chain now have animal welfare assurance programs that are likely to influence large livestock producers in emerging markets."

Many of these changes have been consumer-driven through increased demand and a willingness to pay a premium for products from animals that were raised under humane conditions. Consumers have made it known that governments, corporations, and producers should raise their welfare standards. People are no longer as willing to accept minimum welfare standards and producer self-regulation as the *status quo* through increased consumer expectations for verifiable and transparent regulations and labels identifying humane products.

Numerous studies have shown that producers trained in animal welfare and behavior are likely to have greater profits than those who employ untrained workers. For example, cattle can discriminate between people who have treated them well and those who have treated them poorly. Indeed, dairy cows can recognize a person who has treated them poorly during milking resulting in a decrease in residual milk by 70 percent when that person is present. In addition, the IFC found that while increased animal welfare standards may raise production costs, these

costs may be recouped through the premium prices for which humane products are sold.

Many countries, industries, and producers, however, remain unaware just how much money they are losing due to poor animal welfare practices. For instance, slaughter plants often pay only for the weight of the carcass after all bruised portions have been removed. Unfortunately, many ranchers and producers still engage in handling and transport methods that cause bruising without realizing how much money they are losing due to the poor treatment of their animals. In the United States it has been estimated that bruising accounts for a loss of \$4.03 per carcass. In Costa Rica losses have been estimated at \$2.80 – \$5.00 per carcass.

In another example, a Brazilian supermarket conducted a survey of bruises at their supplying slaughterhouse and found 20 percent of the carcasses had bruises. After training producers in low stress handling, a few minor facility changes, and frequent auditing, the carcass bruise level dropped to 1.3 percent. Once the supermarket reduced the frequency of audits, however, the number of bruised carcasses jumped to 9 percent.

These are concrete examples of the economic benefits available to producers who raise their animal welfare standards. Industries and producers, however, require better information and training on handling, transport, slaughter techniques which can demonstrate the positive economic effects of humane practices. This is where TCB can provide the extra knowledge and training in best practices that yield the most humane and economically beneficial result.

Linking TCB and Animal Welfare

In many developed countries, animal welfare laws and regulations are often fairly advanced and complex. Common animal welfare issues in these countries include proper space allowances, maximizing genetic potential, and disposal of cull or spent animals. Although similar issues are also present in developing countries, they often occur at a much lower frequency. Instead, the welfare issues facing developing countries are far more basic, including access to clean water, veterinary care, adequate nutrition, and humane slaughter, to name a few.

In addition, developing countries also suffer from the limited access to reliable information regarding proper animal care. In developed countries a large percentage of producers, processors, food retailers, and consumers are aware of many of the issues affecting animal welfare. Discussions pertaining to animal welfare in developed countries have taken place on many stages: philosophical, political, economical, religious, environmental, educational, etc. However, it is often the case that no word exists in the local language to adequately describe what is meant by animal welfare, which often becomes an issue when developing countries enter into free trade agreement negotiations with developed countries that have a completely different vocabulary when it comes to this topic.

Increased market access in agriculture available through the completion of an FTA or new concessions at the WTO create new opportunities for developing countries to increase agrobusiness efficiency. Greater efficiency, which can be helped along by TCB, ultimately frees up capital and labor to move toward production of non-traditional exports resulting in increased wealth. In order to take advantage of these opportunities in primary commodity production, however, developing countries must devise long-term diversified strategies, which are supported by the international community through TCB programs.

TCB, however, does not always provide an immediate panacea when implemented in conjunction with an FTA. In some cases, TCB can provide almost immediate entrance into international markets. For others, a great deal of time, funding, and effort with TCB is required. For example, some slaughter plants in Central America which have been working with HSI are now exporting to the U.S. only months after the conclusion of the DR-CAFTA agreement, easily meeting U.S. health and safety standards. Others, however, will require a more considerable period of time before they can comply with USDA and other developed country food regulations that will allow exports to increase.

For those industries or sectors that require extended TCB, market opportunities still exist that can be developed before they are ready to export. Supplying local purchasers has the potential to assist producers and industries in their survival as reduced tariff barriers are phased in following implementation of an FTA. In one example, as the tourism industry continues to expand throughout Central America, there is a growing trend for upscale restaurants and hotels attracting visitors that expect certain types of products. Local producers may be able to provide local hotels and stores with niche products that are produced using humane production methods.

Effective trade capacity building also requires a great deal of strategic planning. Although several developed countries and organizations have attempted to assist various food production industries in Latin America with much needed services or technology, often the aid given was not suited to the environment in which it was placed. For example, many slaughterhouses in Central America have received brand-new equipment and technology through donations that either goes unused or is employed for an unintended purpose. In particular, one slaughter house has a brand new swine de-hairing machine that is used to hold water to wash the floors because there is no electricity to run the machine, and other mechanical equipment serves as a coat rack because replacement parts were too expensive to import. Those providing TCB, therefore, must provide information and technology that is understandable, usable, and relevant to the knowledge and resources of the receiving party.

HSI's Experience with TCB

Much of the work that HSI engages in as part of our TCB programs in Central America is to bring to the countries information and expertise to assist them in complying with potential export markets regulations. HSI's sustainable agriculture TCB programs center on partnerships with local organizations and are intended to educate and train food industries in humane methods of production, transport, and slaughter.

After working with many of these industries for three years, it is evident that they realize the economic advantage to be gained through the incorporation of high welfare standards into their production activities. Indeed, they recognize that improving animal welfare is one step toward achieving compliance with the health and safety regulations of developed countries, which is a requirement under FTAs with the United States. In addition, producers that operate in some of their country's most vulnerable industries have also acknowledged the potential of increased animal welfare to help them not only survive following the implementation of an FTA with the U.S., but to compete in international markets by tapping into both traditional and more lucrative growing niche markets.

Currently, HSI operates a two-prong approach to TCB. First, we assist producers in developing a greater understanding of the economic benefits of animal welfare through practical hands-on technical assistance. HSI believes that providing hands-on technical assistance is a powerful method to further advance and sustain high animal welfare standards. For this reason, HSI staff travels extensively to the region visiting farms, slaughter plants, and auction houses in order to reach as many producers as possible providing practical information and techniques through hands-on demonstrations. HSI staff works with the existing facilities and animals to train people how to recognize, implement, and monitor Good Welfare Practices. Our technical assistance programs may include a full or partial assessment of current practices followed by an oral and/or written report with recommendations.

In order to better accomplish the goals of our technical assistance programs in Central America, HSI has partnered with Bristol University's Animal Welfare Training Team to provide a three-year, bi-annual training program on red meat slaughter. Participants in these courses represent all sectors of the red meat industry, including producers, auction houses, slaughter plants, universities, retailers, government, and veterinarians. At the conclusion of the three-year program, participants who have completed every training session will be asked to join a national welfare team. This team will be challenged with improving the welfare of food animals by assisting in the creation and enforcement of national laws, corporate policy, and various advisory positions. Currently, HSI and Bristol University are conducting courses in Costa Rica and Nicaragua, as well as one Central American regional course.

Second, HSI partners with local organizations including industry associations, corporations, universities, governments and other Non-Governmental Organizations to build trade capacity and provide better information on animal welfare through research, presentations, brochures, and posters. One example of our ongoing work is a partnership with the Costa Rican beef association, CORFOGA, which has completed three carcass studies to assess how much money the industry, individual producers, and, thus, the entire country is losing due to poor production, handling, and transport practices. The knowledge that hitting an animal can cost a producer several dollars per carcass has persuaded the entire industry to examine how it can reduce the number of bruises and injuries on individual animals. An auction in Costa Rica is also working closely with HSI to update its facilities, train employees, develop Good Welfare Practices and a monitoring system, and educate their clients on humane animal handling and transport. Furthermore, Universities in the region have begun to incorporate the lessons of the carcass study into their animal science and veterinary courses, and government positions are being created to oversee animal welfare.

In El Salvador, a lack of information about food safety, meat quality, and animal welfare has had a negative impact on the manner in which pigs are slaughtered. For the slaughterhouse managers and workers, the goal is simply to kill the pig. It makes no difference if the pig dies from exsanguination, drowning in blood, or any other means. HSI has worked with the pork industry in El Salvador to improve the condition of slaughter in order to meet USDA and EU requirements for export. In addition, HSI has brought information to El Salvador that is critical to converting slaughterhouses so that they can begin to pass an animal welfare audit and begin exporting their product to the other members of the DR-CAFTA.

Conclusion

The negotiation of free trade agreements between the United States and Central and South American countries has resulted in a need for Trade Capacity Building in these countries to improve their health and safety standards related to animal products. For the past three years, HSI has worked in Central America to build the capacity of developing countries to better compete domestically, regionally, and in the global economy by adopting high animal welfare standards. In particular, HSI has worked with partners in all facets of the livestock industry on projects that seek to improve animal handling, transport and slaughter. Through technical assistance and knowledge sharing programs, HSI has been able to demonstrate the positive impact high animal welfare can have on the bottom line for ranchers and producers, including increased production and their ability to meet local industry standards, as well as increasing their access to global growing niche export markets for humane products.

HSI's work in Central America on improving animal welfare standards is one of the many technical assistance programs necessary for developing countries to take advantage of the benefits that free trade agreements can bring to agricultural producers in these countries. Given the ever increasing links between animal welfare and international trade, it is important to both continue working on TCB related animal welfare in developing countries, and for the U.S. government and international organizations and multilateral banks to commit to long term funding of animal welfare related Trade Capacity Building.

References

1. U.S. Government Accountability Office, *Foreign Assistance: U.S. Trade Capacity Building Extensive, but its Effectiveness has yet to be Evaluated*, GAO-05-150 at 3 (Feb. 2005) [*hereinafter* GAO TCB Report, 2005].
2. GAO TCB Report, 2005 at 7.
3. U.S. Agency for International Development, *Participation, Empowerment, Partnership: Seeking Sustainable Results through U.S. Trade Capacity Building* (Dec. 2005) at 1.
4. OECD Policy Brief, *Trade Capacity Building: Critical for Development* (Aug. 2003) at 2 [*hereinafter* OECD TCB Policy Brief].
5. OECD TCB Policy Brief at 2.
6. OECD TCB Policy Brief at 4.
7. Foreign Operations, Export Financing, and Related Programs Appropriations Bill, 2006, H.Rep. 109-152, 109th Congress, 1st Session, at 18.
8. H.Rep. 109-152, at 18.
9. H.Rep. 109-152, at 18.
10. H.Rep. 109-152, at 18

11. GAO TCB Report, 2005 at 3.
12. GAO TCB Report, 2005 at 4.
13. GAO TCB Report, 2005 at 33.
14. Foreign Operations, Export Financing, and Related Programs Appropriations Bill, 2003, H.Rep. 107-663, 107th Congress, 2d Session at 21.
15. GAO TCB Report, 2005 at Figure 1, pg. 10.
16. GAO TCB Report, 2005 at Table 1, pg. 9.
17. GAO TCB Report, 2005 at 24.
18. Trade Act of 2002, Pub. L. No. 107-210, Section 2012.
19. The OIE's initiatives on animal welfare, *available at* http://www.oie.int/eng/bien_etre/en_introduction.htm
20. OIE Terrestrial Animal Health Code – 2005, *available at* http://www.oie.int/eng/normes/mcode/en_titre_3.7.htm
21. *See supra*, note 19.
22. International Finance Corporation, *Creating Business Opportunity through Improved Animal Welfare*, *available at* [http://www.ifc.org/ifcext/enviro.nsf/AttachmentsByTitle/p_AnimalWelfare_QuickNote/\\$FILE/Animal+Welfare+QN.pdf](http://www.ifc.org/ifcext/enviro.nsf/AttachmentsByTitle/p_AnimalWelfare_QuickNote/$FILE/Animal+Welfare+QN.pdf) [*hereinafter* IFC Animal Welfare Quick Note].
23. *Id.*
24. Ley de Bienestar de los Animales de la República de Costa Rica #7451, *available in Spanish at* <http://www.micit.go.cr/docs/ley%20bienestar%20animal.pdf>
25. *See* <http://www.mcdonalds.com/corp/values/socialrespons/market/animalwelfare.html>
26. IFC Animal Welfare Quick Note.
27. Hemsworth, P.H., Coleman, G.J., Barnett, J.L., and Borg, S., *Relationships between Human-animal Interactions and Productivity of Commercial Dairy Cows*, *Journal of Animal Science* 78, 2821-2831 (2000).
28. Rushen, J., De Pasille, A.M., and Munksgaard, L., *Fear of People by Cows and effects on Milk Yield, Behavior, and Heart Rate at Milking*, *Journal of Dairy Science*, 82(4): 720-27 (Apr. 1999).
29. IFC Animal Welfare Quick Note.

30. Boleman, S.L., et al., *National Beef Quality Audit–1995: Survey of Producer-related Defects and Carcass Quality and Quantity Attributes*, Journal of Animal Science, 76:96–103 (1998).
31. Boleman, S.L., et al., *National Beef Quality Audit–1995: Survey of Producer-related Defects and Carcass Quality and Quantity Attributes*, Journal of Animal Science, 76:96–103 (1998).
32. Grandin, T., Phone conversation (June 2006)
33. OECD TCB Policy Brief at 3.
34. See HSI Supports Humane Treatment of Livestock at Costa Rican Auction House, available at http://www.hsus.org/about_us/humane_society_international_hsi/international_trade_policy_and_capacitybuilding/HSI_livestock_costa_rica_auction.html.

Panel: Animal Welfare as a Trade Issue

European Point of View

Michael Appleby, Welfare Policy Advisor
World Society for the Protection of Animals
London, UK

In 2005, a Eurobarometer survey carried out across the European Union (EU) confirmed that a large majority of Europeans is strongly concerned about the welfare of farm animals. So the EU has stated – including in submissions to the World Trade Organization (WTO) – that it aims to ensure that trade liberalisation does not undermine EU efforts to improve the welfare of animals. Animal welfare organizations including the World Society for the Protection of Animals stress that such undermining is possible if reducing trade barriers leads to import of products from animals kept in conditions that would be unacceptable in Europe.

One possible defense is classification of certain vulnerable goods, such as dried eggs, as Sensitive Products. Some payments relevant to welfare are categorized in the Green Box, with no expectation that WTO negotiations will require them to be reduced, because they are non-trade-distorting. These include payments within Europe, such as for veterinary training under the Rural Development Programme. They also include support for trade related assistance and capacity building in other countries, for example to improve slaughter conditions to meet humane and hygienic standards necessary for export to the EU. This is in the context of other stated aims of the EU such as development: the EU imports considerable quantities of agricultural goods from Developing Countries.

Furthermore, welfare organizations point out that improvements in welfare provide opportunities for trade, not just obstacles, for example in growing markets for organic and high-welfare foods. All these policies are also being pursued in bilateral agreements, such as that between the EU and Chile, and they are reiterated in the Animal Welfare Action Plan agreed by the European Commission in 2006. The Action Plan also emphasizes collaboration with intergovernmental organizations such as the World Organization for Animal Health (OIE) and the standards agreed by OIE's 167 member countries for humane slaughter and transport.

Disease Transfer Potential: Impact on Animal Husbandry and International Trade

Ron DeHaven, Administrator
USDA, Animal and Plant Health Inspection Service
Washington, DC

See Power Point Presentation

Economics and Animal Welfare: Could these Forces Combine to Move Intensive Animal Production Outside the USA?

W. R. Stricklin
Department of Animal Sciences
University of Maryland

Overview

Animal welfare is intricately and inevitably tied to economics. The economic worth of an animal absolutely affects the care and treatment it is likely to receive. As an example, Barbaro, the 2006 Kentucky Derby winner and potentially a very valuable breeding stallion, had many thousands of dollars spent on his treatment and care after his leg was broken in the Preakness race. Whereas, a spent laying hen with a broken leg is typically killed and composted on the farm because her economic worth amounts to only pennies. Basically all other trade and economic forces, especially the cost of labor, can influence how and by whom animal care is provided. As a consequence, free and open international market forces may combine to dictate the region of the world where future confinement animal agriculture systems will be located. Specifically, confinement animal agriculture may tend to move outside the USA to regions of the world where labor costs for animal care and food processing are much lower – and environmental and animal welfare expectations are less defined and/or enforced.

General Relationship Between Economics and Animal Welfare

Today, American consumers spend approximately 10% of each dollar for food, the least of any people in the world. This comes about primarily because the various animal production systems (beef, pork, poultry, dairy, etc.) compete within and among each other for the same consumer dollar. Consequently, market forces tend to drive the costs of production to a minimum which then contributes to keeping food prices low. I previously discussed (Stricklin, 2005) the general relationship between welfare and economics, and a brief overview follows.

It can be argued that relying solely on market forces to dictate food prices places human interests (food) over possible animal suffering, environmental interests, etc. In short, keeping food costs at an absolute minimum drives the “ethical equation” strictly toward a human interest – cheap food. Fortunately, in an open society, forces other than economics alone have some influence on the welfare of animals. Legislation, policy, trade laws, conscientious consumer patterns, marketing strategy (as in standards by international chain restaurants), and animal-owner behavior based on societally acceptable ethical norms and traditions all can influence the manner in which food animals are raised, housed, transported, and slaughtered.

American animal agriculture remains diverse in size of operation, type of housing, etc., but both the number and percentage of food animals housed in large scale-intensive operations continues to increase. Intensive confinement systems can have both positive and negative aspects in terms of animal welfare and environmental impact. Better health care, control of waste, predator and insect pest avoidance are examples of positive welfare aspects of confinement systems. The negative aspects include 1) restrictions on movement and behavior, 2) crowding, 3) very large group sizes, 4) housing in crates, cages or stalls, etc. And the move

toward large scale intensive systems has resulted in some dramatic shifts. As an example, data from 1990 to 2000 are presented in Figure 1 that demonstrate changes in the dairy industry including 1) more milk produced per individual cow, 2) fewer total cows in production, 3) more total volume of milk produced, and 4) fewer total dairy farmers.

Concomitant with the move toward – or maybe a driving force toward - intensive confinement systems has been an increase in the implementation of technology in animal production. Chemical technology and/or artificial selection have been used to produce more rapid growth and/or greater rates of milk and egg production. Additionally, automated mechanical technology is commonly used in many ways, especially in feeding animals. In short, increased technology on the farm has replaced labor and helped drive systems toward animal confinement and larger production sizes (Stricklin and Swanson, 1993). Because of the increased use of technology during the past Century, the overall decrease in farm labor has been quite dramatic (Figure 2). And today, procedures such as castration, dehorning, needle teeth clipping, beak-trimming are also very much welfare issues and these labor intensive practices are increasing done by workers who have immigrated to the USA and work at low wage levels.

Overall, the public is increasingly asking for assurance that farm animals experience a reasonable quality of life, and this is especially true for persons in Northern European countries. I think an argument can be made that public opinions, both inside and outside the USA, matter because the world continues to be moving rapidly toward a global economy. As an example of public opinion of Europeans affecting North American animal production, one only has to look at the implementation of welfare standards of the international chain restaurants. International concerns that market a “welfare friendly” hamburger in London face considerable pressure to have the same standards for animals they purchase in the USA or else be faced with the charge of being insincere in their actions.

Animal Welfare Legislation and International Trade

When one considers animal welfare on a global basis, the relationship of welfare to economics becomes very complex. This is due largely to the economic aspects of trade, but is also influenced by human values that differ in various parts of the world – as was mentioned above. Northern Europeans consider appropriate animal welfare to be inclusive of natural conditions for the animals; whereas, Americans tend to emphasize physiological stress, health, and disease status as the most important welfare measures of animal well-being. At times European and American scientists each charge the other with not being “scientific” when in fact the debate is based largely on different human values – not different scientific information. Americans tend to value greater control over animal health and sanitation, lower food prices, etc.; whereas, the northern Europeans tend to give greater value to the “naturalness” of both animal housing and the final food product. These different values have contributed to differing approaches to dealing with animal welfare. The European Union (EU) has adopted welfare laws and the USA has not. Europeans also express greater concern over genetically modified organisms (GMO’s) than do Americans, including concerns about the possible impact on animal welfare. As the world moves toward a global economy, these differences in human values – and those in other parts of the world – will have increasing importance on trade negotiations and agreements.

Within the EU some countries have adopted additional, more stringent, welfare legislation. In such instances producers need either protection or compensation, if they are not to be undercut

by producers operating in countries with lower or no standards. Such trade restrictions can be – and are - viewed as protectionism and ultimately will need to be agreed to by a world body such as the World Trade Organisation (WTO). To date the World Court has ruled that animal welfare is not a basis for refusing importation of animal products. However, the topic continues to be raised in trade negotiations and countries with animal welfare standards are likely to push for a universal world standard on animal welfare – and changes in WTO rules.

Europe imports a considerable amount of poultry from Brazil and Southeast Asian countries, especially Thailand. These countries have no animal welfare standards, which of course places European producers at a disadvantage, and increases the pressure to impose a global welfare standard. Even among EU countries, trade and animal welfare can have complex relations. Sweden banned traditional battery cages for hens, and some Swedish producers sold their cages to producers in Finland. At one time, Sweden was importing eggs produced in the same cages that had been banned internally, with Swedish egg producers not pleased with the outcome. This demonstrates that unilateral legislation alone does not always initially improve animal welfare globally especially when international trade is void of animal welfare standards. Legislation aimed at improved welfare paired with free trade can even have a paradoxical effect of initially bringing on more stressful conditions for animals. As an example, when Britain was phasing out the use of veal crates, some calves were shipped across to The Netherlands, even to Italy, and fed out in traditional crates. Therefore, the legislation initially did not improve the welfare of veal calves; instead, it brought on additional stress through long distance transport and simply shifted the location of veal crate production systems to another country. Lack of global standards could drive animal production to those countries without standards or to countries where enforcement is less rigorous.

North American and European developed countries could also face the possibility of a shift toward greater importation of animal food products – because of the current labor costs associated with processing and packaging food. Only 23% of the USA food dollar goes to the farm, and the biggest added cost - over 38 % - is for labor associated with processing (Figure 3). Furniture and paper production are shifting to China with the raw materials - logs and pulp - shipped from the USA across the Pacific and the finished products shipped back for sale in the USA. This is possible because of much lower labor costs in China.

Today, grain and soybean products are shipped from North and South America to Southeast Asia, fed to livestock and the food products sold in Hong Kong, Taiwan, Singapore, and Japan. Some of these operations are very large production units. Similarly, China is rapidly expanding the number of large animal units. As economic development occurs within these regions, it is likely that consumption of animal products will increase which typically follows in a society experiencing economic development. But, these regions may also increase their export of processed animal food products. The lower labor costs associated with production and processing animal food products in Asia, combined with different environmental and welfare standards, could potentially shift a considerable amount of American animal agriculture outside this country. Thus, addressing welfare and environmental standards within the USA and acting as a serious participant in international negotiations are important to ensuring both appropriate animal treatment and a sound future for American animal agriculture.

And as a final example of some current international trends having to do with animal care, the Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC) somewhat recently changed its name to AAALAC International. This change came about in part as a result of at least a few groups that conduct animal research, shifting their animal activities to countries

such as the Philippines where animal caretakers and technicians can be employed at wages considerably lower than those in Europe and North America. As of July 2006, the AAALAC International web site (<http://www.aaalac.org/>) listed 61 accredited programs in 24 countries (of 670 total accredited programs). Animal agriculture today uses a large amount of immigrant labor. Thus, it is maybe not appropriate to suggest that a direct comparison can be made in the trends for animal care in research and food animals. But ultimately, open and free international trade will likely tend to also drive food animal production systems to locate where labor is cheapest - and to countries where environmental and animal welfare restrictions are the least costly.

Summary and Conclusion

Many traditional North American manufacturing and processing enterprises have already moved to “offshore” locations. Similarly, cheap labor, combined with less rigorous environmental and/or animal welfare standards could combine to result in a major migration of confinement animal production systems to locations outside North America. Such a migration of production systems to other regions of the world may not be in the long-term best interests of animal producers, animal protection advocates, USA consumers/citizens, or the animals themselves. Therefore, it is in the best interests of all parties impacted for North American animal agriculture leaders and animal protection leaders and activists to focus attention on finding and implementing the most sustainable animal agriculture systems domestically.

References

- Stricklin, W.R. 2005. Farm Animal Welfare: Economic Policies. Ed: Wilson G. Pond & Alan W. Bell. Encyclopedia of Animal Science. July. p 1-4. (DOI 10.1081/E-EAS-120019595)
- Stricklin, W.R. and J.C. Swanson. 1993. Technology and Animal Agriculture. Journal of Agricultural and Environmental Ethics. 6(Suppl. 1):67-80.
- USDA-NASS. United States Department of Agriculture-National Agricultural Statistics. 2002 (http://www.usda.gov/nass/aggraphs/fl_typwk.htm).

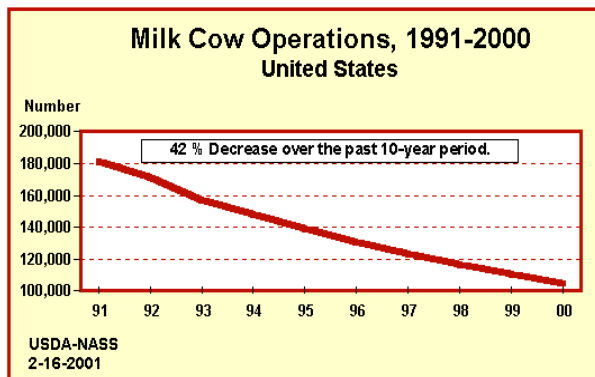
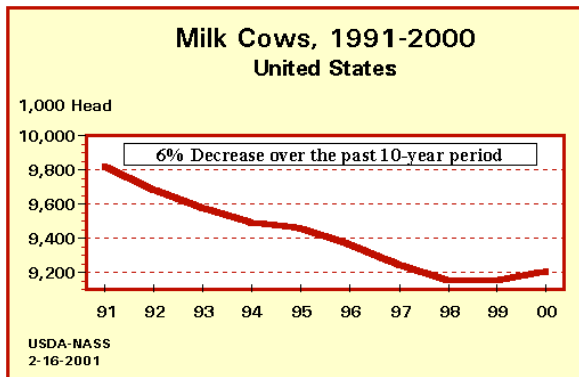
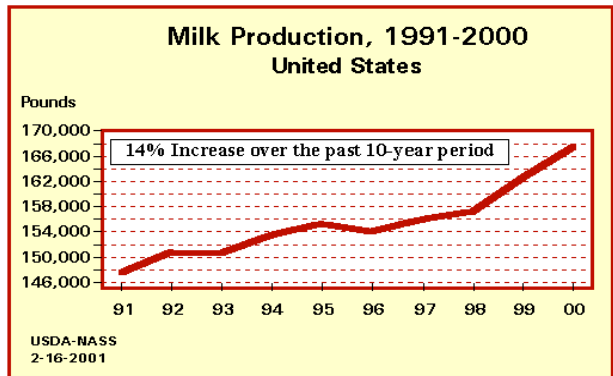
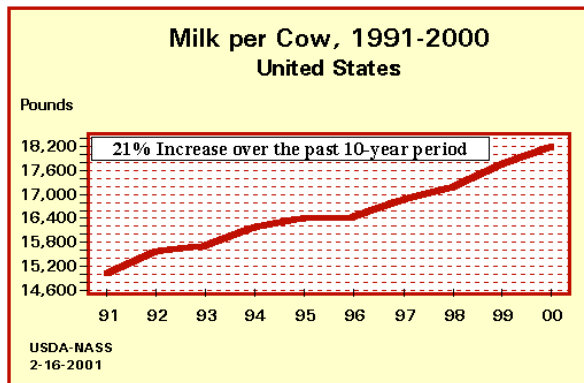


Figure 1. The above graphed data indicate that from 1990 to 2000, a) milk per cow increased 21%, b) the number of milk cows decreased 6%, c) total milk produced increase 14%, and d) the number of milk operations (farms) decreased 42%.

http://www.usda.gov/nass/aggraphs/fl_typwk.htm

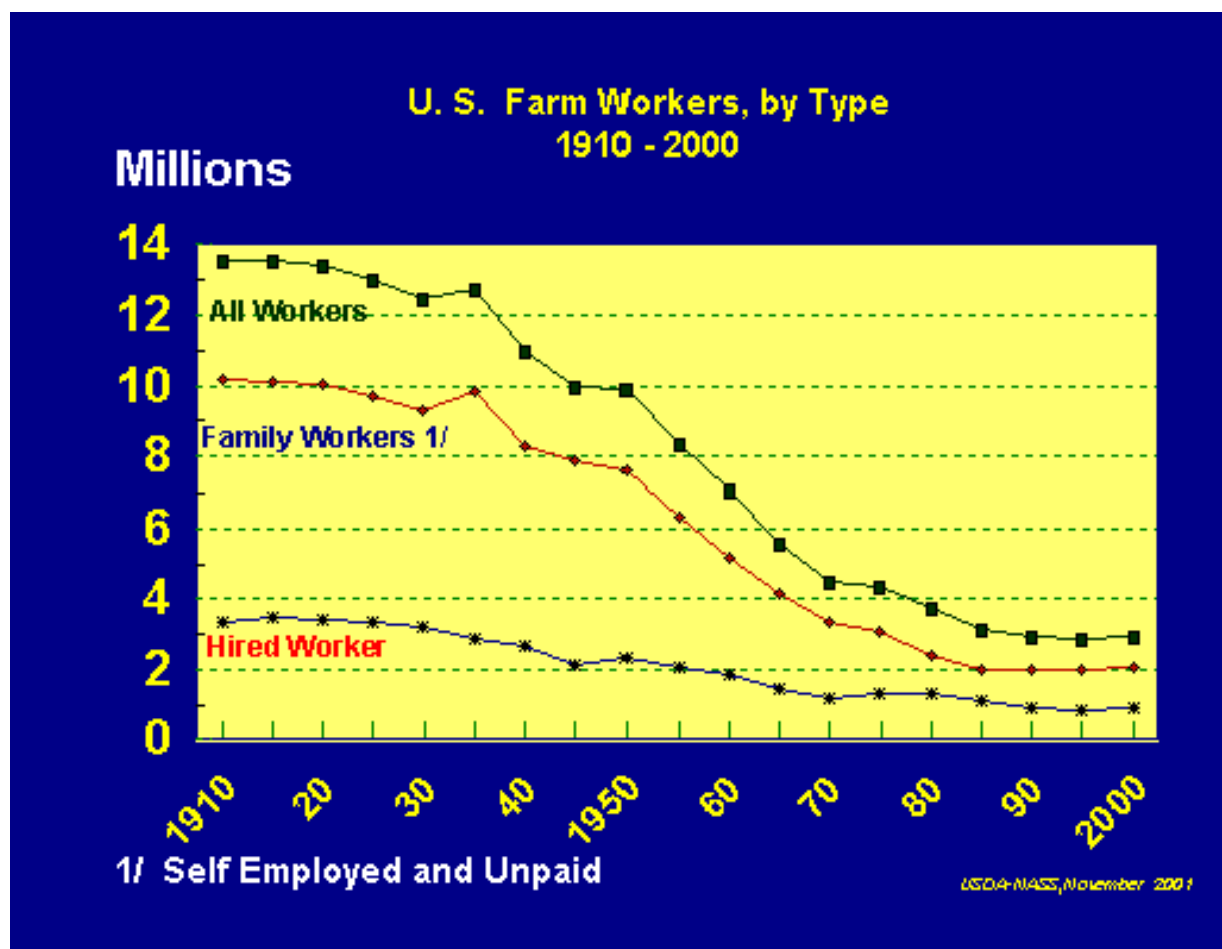


Figure 2. The number of Farm Workers has declined dramatically during the 20th Century.
http://www.usda.gov/nass/aggraphs/fl_typwk.htm

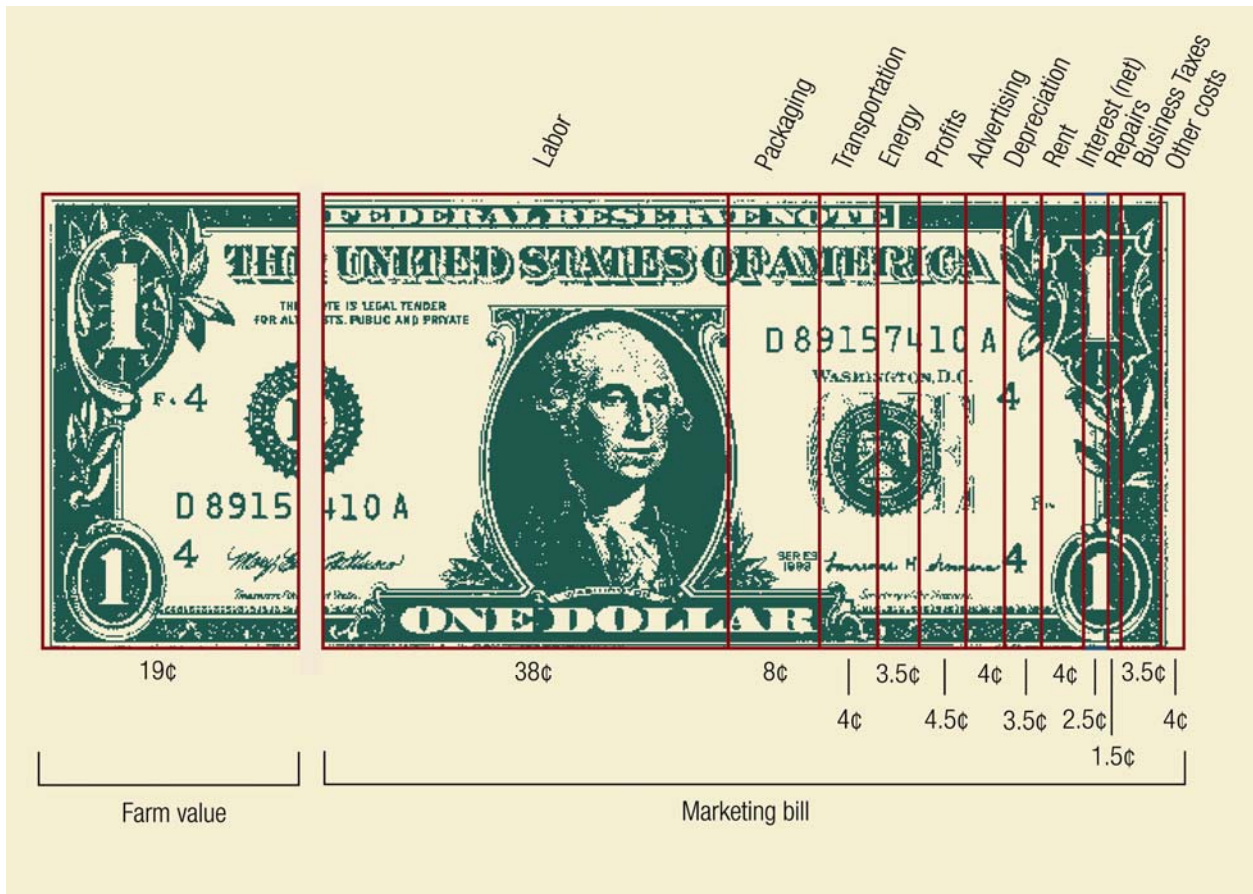


Figure 3. Only 23 cents of each dollar spent on food goes to the farm and the remainder is associated with processing and marketing (USDA, 2002). The cost of labor is the biggest part of the total food marketing bill, accounting for nearly half of all marketing costs.

<http://www.usda.gov/factbook/2002factbook.pdf>

How must or should the USA address trade and animal welfare issues?

Industry Point of View

Greg Doud, Chief Economist
National Cattlemen's Beef Association

How must or should the USA address trade and animal welfare issues?

Advocacy Group Point of View

Marlene Halverson, Farm Animal Economics Advisor
Animal Welfare Institute

See Power Point Presentation

Appendix A

Program and Speaker Contact Information

- Moderator: Richard Reynnells, National Program Leader
Animal Production Systems
USDA Cooperative State Research, Education, and Extension Service,
Plant and Animal Systems
800 9th Street, SW, Room 3140 Waterfront Centre
Washington, DC 20250-2220
T#: 202.401.5352
F#: 202.401.6156
Email: rreynells@csrees.usda.gov
- 8:30 - 8:35 **Introductory Comments**
Richard Reynnells
USDA/CSREES/PAS
- 8:35 - 8:45 **Welcome**
Charles Conner, Deputy Secretary
US Department of Agriculture
Washington, DC
- 8:45 - 9:15 **Current Critical Issues in International Trade**
David Blandford
Professor of Agricultural Economics
Department of Agricultural Economics and Rural Sociology
The Pennsylvania State University
University Park, PA 16802-5600
Tel: 1-814-863-8648
Fax: 1-814-865-3746
Email: dblandford@psu.edu
Website: <http://dblandford.aers.psu.edu>
- 9:15 - 9:45 **Canadian Experience: Keys to Successful Cooperation between Diverse Groups**
Susan Church, Manager
Alberta Farm Animal Care
Cambrian PO Box 75028
Calgary, Alberta, T2K 6J8
Canada
T#: 403.932.8050
F#: 403.932.8052
Email: info@afac.ab.ca
www.afac.ab.ca
- 9:45 - 10:00 BREAK

10:00 - 12:00

Panel: Animal Welfare as a Trade Issue

1. Michael David, Director
National Center for Import and Export
Sanitary International Standards Team Veterinary Services
4700 River Rd Unit 33
Riverdale, MD 20737
T#: 301-734-5324
F#: 301-734-8818
Email: michael.j.david@aphis.usda.gov
usa.oie@aphis.usda.gov
2. Lori Mitchell, Economist
Foreign Demand and Competition Branch
USDA, Economic Research Service
1800 M Street, NW, Room N5168
Washington, DC 20036
T#: 202.694.5234
F#: 202.694.5795
Email: lmitchel@ers.usda.gov
3. Kay Johnson, Executive Vice President
Animal Agriculture Alliance
1501 Wilson Boulevard, Suite 1100
Arlington, Virginia 22209
T#: 703.562.5160
F#: 703.524.1921
email: kjohnson@animalagalliance.org
4. Marta Prado, Special Counsel for International Trade Policy
Humane Society of the United States/Humane Society
International
2100 L Street, NW
Washington, DC 20037
T#: 202.293.5105
F#: 202.293.5109
Email: mprado@hsus.org
5. Michael Appleby, Trade Policy Manager
World Society for the Protection of Animals
Eurogroup for Animal Welfare and RSPCA
89 Albert Embankment
London, SE1 7TP, UK
T#: Switchboard +44 (0) 207.587.5000
T#: Direct +44 (0) 207.840.6243
F#: +44 (0) 207. 793.0208
Email: michaelappleby@wspa.org.uk
6. Discussion

12:00 - 1:30

LUNCH (on your own)

Moderator:

David Brubaker
Agri-business Consultant
145 South Spruce Street
Lititz, PA 17543
T#: 717.627.0410
F#: 717.627.1847
Email: PennsylvaniaB@aol.com

1:30 - 2:15

Disease Transfer Potential: Impact on Animal Husbandry and International Trade

Ron DeHaven, Administrator
USDA, Animal and Plant Health Inspection Service
1400 Independence Avenue SW
Room 312E Whitten Building
Washington, DC 20250
T#: 202.720.3861
F#: 202.720.3054
Email: Ron.DeHaven@aphis.usda.gov

2:15 - 2:45

Economics and Animal Welfare Implications of Moving Animal Production Outside the USA

Ray Stricklin, Professor
Animal and Avian Sciences Department
1413A AnSc/AgEng Building
University of Maryland
College Park, MD 29742-2311
T#: 301.405.1382
F#: 301.314.9059
Email: wrstrick@umd.edu

2:45 - 3:00

BREAK

3:00 - 3:30

How must or should the USA address trade and animal welfare issues?

Greg Doud, Chief Economist
National Cattlemen's Beef Association
1301 Pennsylvania Avenue NW, Suite 300
Washington, DC 20004
T#: 202.347.0228 E137
F#: 202.638.0607
Email: gdoud@beef.org

Marlene Halverson, Farm Animal Economics Advisor
Animal Welfare Institute
P. O. Box 286
Northfield, Minnesota 55057
T#: 507.645.8434
F#: 507.664.9448
Email: rexxie1@aol.com

3:30 - 3:55

Open Response, Audience Sign-Up

3:55 - 4:00

Summary

Ray Stricklin, Professor
Animal and Avian Sciences Department
1413A AnSc/AgEng Building
University of Maryland
College Park, MD 29742-2311
T#: 301.405.1382
F#: 301.314.9059
Email: wrstrick@umd.edu

Appendix B

2006 List of Co-Coordiators

Kay Johnson, Executive Vice President
Animal Agriculture Alliance
1501 Wilson Boulevard, Suite 1100
Arlington, Virginia 22209
T#: 703.562.5160
F#: 703.524.1921
Email: kjohnson@animalagalliance.org

David Brubaker
Agri-business Consultant
145 South Spruce Street
Lititz, PA 17543
T#: 717.627.0410
F#: 717.627.1847
Email: PennsylvaniaB@aol.com

Ken Klippen
Poultry Industry Consultant
Klippen and Associates
P. O. Box 7156
Audubon, PA 19407-7156
T#: 610.415.1055
Tcell#: 484.744.3851
F#:
Email: ken@klippenassociates.com

Richard Wood, Executive Director
Food Animal Concerns Trust
P. O. Box 14599
Chicago, IL 60614
T#: 773.525.4952
F#: 773.525.5226
Email: rrwood@fact.cc

Richard Reynnells, National Program Leader
Animal Production Systems
USDA Cooperative State Research, Education, and Extension Service, Plant and Animal
Systems
800 9th Street, SW, Room 3140 Waterfront Centre
Washington, DC 20250-2220
T#: 202.401.5352
F#: 202.401.6156
Email: rreynells@csrees.usda.gov

Appendix C

Power Point Presentations

Panel: Animal Welfare as a Trade Issue

[Current Critical Issues in Agricultural Trade](#)

David Blandford, Professor
Pennsylvania State University

[Canadian Experience: Keys to Successful Cooperation Between Diverse Groups](#)

Susan Church, Manager
Alberta Farm Animal Care, Canada

[The World Organization for Animal Health \(OIE\) and Animal Welfare](#)

Michael David, Director, National Center for Import and Export
USDA, Animal and Plant Health Inspection Service

[Animal Welfare Regulations and International Trade](#)

Lori Mitchell, Economist
USDA, Economic Research Service

[Animal Welfare as a Trade Issue: Agriculture's Concerns](#)

Kay Johnson, Executive Vice President
Animal Agriculture Alliance

[Animal Welfare and Trade Capacity Building](#)

Marta Prado, Special Council for International Trade Policy
Humane Society of the US

[Animal Welfare as a Trade Issue: European Point of View](#)

Michael Appleby, Welfare Policy Advisor
World Society for the Protection of Animals

[Disease Transfer Potential: Impact on Animal Husbandry and International Trade](#)

Ron DeHaven, Administrator
USDA, Animal and Plant Health Inspection Service

[Economics and Animal Welfare Implications of Moving Animal Production Outside the USA](#)

Ray Stricklin, Professor
University of Maryland

[How Must or Should the USA Address Trade and Animal Welfare Issues?](#)

Marlene Halverson, Farm Animal Economics Advisor
Animal Welfare Institute