

## PETITION FOR RULEMAKING

**TO:**

Thomas J. Vilsack, Secretary  
United States Department of Agriculture  
Jamie L. Whitten Federal Building  
Room 200-A  
12<sup>th</sup> and Jefferson Drive, SW  
Washington, DC 20250

Cindy Smith, Administrator  
Animal and Plant Health Inspection Service  
United States Department of Agriculture  
Jamie L. Whitten Federal Building  
Room 313-E  
12<sup>th</sup> and Jefferson Drive, SW  
Washington, DC 20250

**PETITION:**

To Amend the *Inspection and Handling of Livestock for Exportation*  
Regulations to Include Fitness for Transport Requirements

**SUBMITTED BY:**

**Animal Welfare Institute**, 900 Pennsylvania Avenue SE, Washington,  
DC 20003, 202-337-2332; **World Society for the Protection of Animals**,  
USA Office, 89 South Street, Suite 201, Boston, MA 02111,  
617-896-9214

**DATE:**

February 18, 2011

## **I. INTRODUCTION**

This petition is submitted on behalf of the Animal Welfare Institute (“AWI”) and the United States office of the World Society for the Protection of Animals (“WSPA”) and requests that the United States Department of Agriculture (“USDA”), and its Animal and Plant Health Inspection Service (“APHIS”), initiate rulemaking to amend the “exportation of animals” regulations by adopting the animal welfare standards of the World Organisation for Animal Health (“OIE”) for the transport of animals.

This action is necessitated by the increasing numbers of pigs, sheep, goats, horses, and especially cattle that are being exported by the U.S. to foreign countries and the potential risks that these journeys pose to human health and animal health and welfare. International transports may cover many thousands of miles and last two weeks or longer. Cattle, pigs, sheep, and other animals are exposed to the potential for disease and injury as a direct result of such extensive transport. Long distance transport is highly stressful for these animals. Stress lowers an animal’s resistance to infection, and consequently stress during transport significantly contributes to welfare problems, animal disease, and meat contamination. It is therefore imperative that, as prescribed by the Animal Health Protection Act, only physically fit animals be transported to reduce incidences of morbidity and mortality.

Current U.S. live animal export regulations are vague and do not provide exporters or USDA inspectors with adequate guidance in determining whether an animal is fit to be transported. While current regulations require animals be certified as “sound” prior to export, no guidance is provided as to the meaning of the term. For instance, evidence exists that pregnant cattle in the final stage of gestation are being approved for export, suggesting that commonly-recognized fitness requirements are not presently being followed. The addition of fitness to travel criteria to APHIS regulations for the exportation of animals will ensure that the inspection of animals is conducted in a uniform manner. The USDA has clear legal authority under both the Federal Meat Inspection Act and the Animal Health Protection Act to initiate this action.

## **II. INTERESTS OF THE PETITIONERS**

### **A. Animal Welfare Institute**

Petitioner the Animal Welfare Institute, a non-profit charitable organization, has been alleviating the suffering inflicted on animals by humans since 1951. AWI aims to improve the welfare of animals used in agriculture through engagement with policymakers, scientists, industry, non-governmental organizations, farmers, veterinarians, teachers, and the public. Specifically, AWI seeks to abolish factory farms, support high-welfare family farms, achieve humane slaughter, and oversee and improve transport conditions for all animals raised for food. Animal Welfare Approved, a high-welfare food certification, is a program of the Animal Welfare Institute. Headquartered in Washington, DC, AWI has members and supporters throughout the United States. AWI is a Member Society of the World Society for the Protection of Animals (WSPA).

## **B. World Society for the Protection of Animals**

Petitioner the World Society for the Protection of Animals, a non-profit charitable organization, is represented in 16 countries and works with a network of more than 1,000 animal welfare organizations in 156 countries. WSPA works where there is the greatest need to stop animal suffering and cruelty using a combined and collaborative approach encompassing hands-on work, educational initiatives, lobbying and awareness campaigns. WSPA holds consultative status with the United Nations and observer status with the Council of Europe. WSPA promotes the development of humane and sustainable agriculture methods that respect animal welfare, the environment, and rural livelihoods. WSPA works to end systems of farm animal production that cause animal suffering. Headquartered in London, United Kingdom, with a U.S. office in Boston, MA, WSPA has members and supporters throughout the United States and worldwide.

## **III. REQUESTED ACTION**

U.S. citizens have the right to petition their government to add, amend, or repeal regulations relating to agriculture under the Right to Petition Government Clause of the First Amendment of the United States Constitution,<sup>1</sup> the Administrative Procedure Act,<sup>2</sup> and USDA regulations.<sup>3</sup> Under this authority, the petitioners submit this petition for rulemaking to the Secretary of the Department of Agriculture (“Secretary”). Petitioners request that the Secretary amend the Inspection and Handling of Livestock for Exportation regulations<sup>4</sup> to include fitness to transport requirements for all animals offered for exportation to any foreign country, excluding by land to Mexico or Canada. The purpose of the requested action is to protect the foreign commerce of the United States as well as the health and welfare of animals exported from the United States, and to ensure that animals from the U.S. arrive at their foreign destination in a healthy condition. The requested action is appropriate under the Federal Meat Inspection Act<sup>5</sup> and the Animal Health Protection Act,<sup>6</sup> which allow the Secretary to prohibit or restrict the exportation of any livestock determined unfit to be moved.<sup>7</sup>

## **IV. LEGAL BACKGROUND**

### **A. Twenty-Eight Hour Law**

The United States Congress enacted the Twenty-Eight Hour Law, codified as 49 U.S.C. Section 80502, in 1873 to regulate the amount of time animals can be transported before they must be

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<sup>1</sup> U.S. Const. Amend. I.

<sup>2</sup> 5 U.S.C. § 553(e).

<sup>3</sup> 7 C.F.R. § 1.28.

<sup>4</sup> 21 U.S.C. § 612 *et seq.*

<sup>5</sup> 21 U.S.C. § 601 *et seq.*

<sup>6</sup> 7 U.S.C. § 8301 *et seq.*

<sup>7</sup> 7 U.S.C. § 8304(a)(2).

provided with food, water, and rest.<sup>8</sup> The Twenty-Eight Hour Law applies only to livestock being transported domestically between states.<sup>9</sup> The current law further specifically excludes animals being transported by air or water.<sup>10</sup>

In 1884, Congress established the Bureau of Animal Industry (“BAI”) within the USDA.<sup>11</sup> The mission of the BAI was to suppress and eradicate contagious diseases among domestic animals. The BAI was also assigned the task of enforcing the Twenty-Eight Hour Law. Today, the task of enforcing the Twenty-Eight Hour Law falls within the purview of the Veterinary Services (“VS”) program of APHIS whose mission includes providing “responsive and quality information technology services and delivery to VS and its stakeholders which protects and improves the health, quality, and marketability of our nation's animals, animal products and veterinary biologics.”<sup>12</sup> To facilitate international trade and promote international safeguarding of animal health, VS is responsible for the inspection of animals intended for export at U.S. ports.<sup>13</sup>

## **B. Animal Health Protection Act**

The Animal Health Protection Act (“AHPA”) is the federal statutory framework for animal health legislation. It is codified in Title 7, U.S.C. Section 8301 *et seq.* AHPA was passed in 2002 and consolidated as well as updated prior animal health statutes.<sup>14</sup> Congress made clear that the Act was intended for the prevention, detection, and eradication of diseases in animals in order to protect 1) the health of animals, 2) the health and welfare of the people of the United States, 3) the economic interests of the livestock and related industries of the United States, 4) the environment of the United States, and 5) interstate commerce and foreign commerce of the United States in animals and other articles.<sup>15</sup> Congress’s findings further noted that the health of animals is affected by the methods by which animals are transported in interstate and foreign commerce.<sup>16</sup> The Act enables the Secretary of Agriculture to prohibit the exportation of any livestock, defined in 7 U.S.C. Section 8302(10) as “any farm raised animal,” that are deemed to be unfit to be moved.<sup>17</sup>

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<sup>8</sup> Up until 2006 trucks had been exempt from the law. In response to a rulemaking petition by humane organizations submitted in October 2005 the USDA stated that the Twenty-Eight Hour Law also applies to trucks which operate as common carriers, reasoning that the plain meaning of the statutory term “vehicle” included trucks.

<sup>9</sup> 49 U.S.C. § 80502.

<sup>10</sup> *Id.*

<sup>11</sup> See *The History of APHIS*, available at [http://www.aphis.usda.gov/about\\_aphis/history.html](http://www.aphis.usda.gov/about_aphis/history.html) (last accessed Feb. 14, 2011).

<sup>12</sup> *Id.*

<sup>13</sup> *Id.*

<sup>14</sup> *Id.*

<sup>15</sup> 7 U.S.C. § 8301(1).

<sup>16</sup> 7 U.S.C. § 8301(3).

<sup>17</sup> 7 U.S.C. § 8304(2).

### **C. Inspection and Handling of Livestock for Exportation Regulations**

The Federal Meat Inspection Act, codified as 21 U.S.C. Section 601 *et seq.*, was originally passed in 1906. Section 612 “Inspection of animals for export” specifies that “the Secretary shall cause to be made a careful inspection of all cattle, sheep, swine, goats, horses, mules, and other equines intended and offered for export to foreign countries at such times and places, and in such manner as he may deem proper, to ascertain whether such cattle, sheep, swine, goats, horses, mules, and other equines are free from disease.” The statute enables the Secretary to appoint inspectors who are “authorized to give an official certificate clearly stating the condition” of the animal.<sup>18</sup> Furthermore, the clearance of vessels carrying animals for export without an authorized inspector’s certificate stating that the animals are “sound and healthy” is prohibited by 21 U.S.C. Section 614.<sup>19</sup>

Acting on the mandate from the Federal Meat Inspection Act the USDA promulgated the regulations in 9 C.F.R. Part 91, “Inspection and Handling of Livestock for Exportation,” prescribing conditions for exporting live animals from the United States. Among other provisions, the general export requirements under Section 91.3, paragraph (a), stipulate that:

“All animals intended for export to a foreign country, except by land to Mexico or Canada, must be accompanied from the State of origin of the export movement to the port of embarkation by an origin health certificate.[...] The origin health certificate must certify that the animals were found upon inspection to be healthy and free from evidence of communicable disease.”

Prior to amendment in 1995, the third sentence in Section 91.3(a) specified that the animals for export “were found to be sound, healthy, and free from evidence of communicable disease and exposure thereto.” The Action for the proposed rule published in the *Federal Register* on June 21, 1994 explained that the word “sound” should be removed as it is too vague to be enforceable. However, the Final Rule published on February 21, 1995 provided no further reason for the change, specifying only that the third sentence in Sec. 91.3, paragraph (a), was amended to remove the phrase “sound, healthy,” and put only the word “healthy” in its place. The Final Rule published on February 21, 1995 also requires that animals intended for export be inspected within 24 hours of embarkation. 9 C.F.R. 91.15 specifically deals with the inspection of animals to be exported, but provides little guidance to a veterinarian performing the inspection as to what qualifies an animal as fit versus unfit to travel.

### **D. Horse Fitness to Travel Regulations**

In promulgating regulations for the commercial transportation of equines for slaughter, the USDA provided far more guidance to assist in the determination of whether an animal is fit for

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<sup>18</sup> 21 U.S.C. § 613.

<sup>19</sup> 21 U.S.C. § 614.

travel. 9 C.F.R. 88.4 requires the owner to make a statement of fitness to travel at the time of loading which must accompany the animal throughout transit. 9 C.F.R. 88.4(a)(3)(vii) specifies the criteria an animal must meet in order to be deemed fit to travel. It requires that the equine is:

- 1) able to bear weight on all four limbs,
- 2) able to walk unassisted,
- 3) not blind in both eyes,
- 4) older than 6 months, and
- 5) not likely to give birth during the trip.

A USDA representative may review the certificates and examine animals at any point during travel to check for compliance with the regulation.<sup>20</sup> The USDA representative is further vested with the power to direct the owner/shipper to take “actions to alleviate the suffering of any equine,” which includes securing the services of an equine veterinarian.<sup>21</sup>

## **V. FACTUAL BACKGROUND**

### **A. Number and Species of Animals Exported from the U.S.**

Each year in the United States, approximately 300 million pigs, cattle, sheep, goats, and horses are sold.<sup>22</sup> Of that number, only a very small percentage is exported live out of the U.S., and most of those travel by land across the border to Canada or Mexico.<sup>23</sup> Since 2005, roughly 30,000 to 50,000 animals of these species have been exported each year to foreign countries other than Canada or Mexico (see Table 1 on the following page).

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<sup>20</sup> 9 C.F.R. § 88.4(d).

<sup>21</sup> 9 C.F.R. § 88.4(e).

<sup>22</sup> USDA, National Agricultural Statistics Service, *2007 Census of Agriculture*, February 2009, pp. 19, 22, 25.

<sup>23</sup> See USDA, Foreign Agricultural Service, *Global Agricultural Trade System (GATS)*, accessible at <http://www.fas.usda.gov/gats/default.aspx>.

**Table 1. Number of Live Animals Exported from the U.S.,  
Excluding to Canada & Mexico  
2005 - 2010**

| <b>Species of Animal</b>                                                                  | <b>2005</b>   | <b>2006</b>   | <b>2007</b>   | <b>2008</b>   | <b>2009</b>   | <b>2010</b>   |
|-------------------------------------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Beef Cattle,<br>Breeding Females                                                          | 159           | 114           | 313           | 1,712         | 2,442         | 7,875         |
| Beef Cattle,<br>Breeding Males                                                            | 11            | 46            | 152           | 372           | 267           | 165           |
| Dairy Cattle,<br>Breeding Females                                                         | 571           | 3,537         | 5,650         | 10,317        | 2,900         | 19,190        |
| Dairy Cattle,<br>Breeding Males                                                           | 45            | 2             | 26            | 16            | 661           | 85            |
| Cattle,<br>Other                                                                          | 412           | 8,334         | 2,365         | 7,840         | 6,257         | 1,666         |
| Pigs                                                                                      | 18,317        | 9,195         | 11,444        | 14,490        | 8,364         | 8,052         |
| Sheep, Lambs & Goats                                                                      | 1,048         | 4,004         | 1,058         | 314           | 1,664         | 5,804         |
| Livestock,<br>Other                                                                       | 282           | 623           | 2,182         | 5,125         | 6,073         | 848           |
| Horses,<br>Breeding                                                                       | 6,550         | 3,279         | 2,950         | 2,917         | 4,860         | 6,980         |
| Horses,<br>Other                                                                          | 22,804        | 3,318         | 3,998         | 5,548         | 5,382         | 4,643         |
| <b>TOTAL</b>                                                                              | <b>50,199</b> | <b>32,452</b> | <b>30,138</b> | <b>48,651</b> | <b>38,870</b> | <b>55,308</b> |
| <i>Data Source: Department of Commerce, U.S. Census Bureau, Foreign Trade Statistics.</i> |               |               |               |               |               |               |

## **B. Countries Importing Animals from the U.S.**

Many countries import live farmed animals from the U.S.; however, only a few bring in large numbers (see Table 2). The U.S. Department of Commerce's Foreign Trade Statistics database<sup>24</sup> suggests that relatively few large shipments take place. For example, in 2009, Trinidad and Tobago imported 1,300 sheep and goats from the U.S., and China imported a total of 13,971 pigs from the U.S. between 2008 and 2010.

Cattle represent the most frequently exported livestock from the U.S., with animals typically traveling to Russia, Turkey, and the Middle East, presumably to establish herds of both beef and dairy breeds. In 2008, the U.S. exported approximately 1,000 breeding female beef cattle to Turkey, and 2,000 of the animals went to Russia in 2009. Breeding female dairy cattle are also shipped: Egypt and Morocco each imported approximately 2,000 in 2008, and Saudi Arabia imported more than 12,000 breeding dairy cows between 2006 and 2008. Currently the largest importer of U.S. cattle is Turkey, which has imported more than 26,000 breeding female cattle

<sup>24</sup> Available through the USDA, Foreign Agricultural Service, *Global Agricultural Trade System (GATS)*, accessible at <http://www.fas.usda.gov/gats/default.aspx>.

since 2007, with 21,412 imported in 2010 alone. The number of beef and dairy cattle exported by the U.S. rose sharply in the past year, from a total of 6,270 animals in 2009 to 27,315 animals in 2010 (Table 1 above).

**Table 2. Importers of Live Animals from the U.S., Excluding Canada & Mexico  
2005 - 2010**

| <b>Importing Country*</b> | <b>Cattle</b> | <b>Pigs</b> | <b>Sheep</b> | <b>Other Livestock</b> | <b>Equines</b> | <b>TOTAL</b> |
|---------------------------|---------------|-------------|--------------|------------------------|----------------|--------------|
| Argentina                 |               |             |              |                        | 2,265          | 2,265        |
| Australia                 |               |             |              |                        | 1,534          | 1,534        |
| Bahamas                   |               | 229         | 1,092        |                        |                | 1,321        |
| Belgium-Luxembourg        |               |             |              |                        | 1,354          | 1,354        |
| Brazil                    | 925           | 1,382       |              |                        | 1,666          | 3,973        |
| Cayman Islands            | 221           |             | 1,411        |                        |                | 1,632        |
| China                     | 227           | 18,541      |              | 4,275                  | 489            | 23,532       |
| Colombia                  |               | 1,120       | 595          |                        | 817            | 2,532        |
| Costa Rica                | 202           | 866         |              |                        | 505            | 1,573        |
| Dominican Republic        | 142           | 1,154       |              |                        | 808            | 2,104        |
| Egypt                     | 1,913         |             |              |                        |                | 1,913        |
| Germany                   |               |             |              |                        | 1,662          | 1,662        |
| Hong Kong                 | 302           | 24,575      |              |                        | 1,591          | 26,468       |
| Indonesia                 | 7,148         |             |              |                        | 235            | 7,383        |
| Ireland                   |               |             |              |                        | 2,876          | 2,876        |
| Japan                     |               | 4,447       |              | 182                    | 3,756          | 8,385        |
| Kazakhstan                | 2,242         |             |              |                        | 30             | 2,272        |
| Korea, South              |               | 5,292       |              |                        | 1,708          | 7,000        |
| Leeward-Windward Is.      |               |             | 792          | 473                    |                | 1,265        |
| Morocco                   | 2,052         |             |              |                        |                | 2,052        |
| Netherlands               |               |             |              |                        | 6,382          | 6,383        |
| Netherlands Antilles      |               | 630         | 1,298        |                        |                | 1,928        |
| Panama                    | 717           | 514         |              |                        | 891            | 2,122        |
| Philippines               |               | 1,240       | 5,472        |                        | 331            | 7,043        |
| Russia                    | 20,491        |             |              |                        | 469            | 20,960       |
| Saudi Arabia              | 13,048        |             |              |                        | 1,269          | 14,317       |
| Spain                     |               |             |              | 3,279                  |                | 3,279        |
| Sweden                    |               |             |              |                        | 2,778          | 2,778        |



|                                                                                                                                                                                                            |        |       |       |       |        |        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------|-------|-------|--------|--------|
| Taiwan                                                                                                                                                                                                     |        | 1,760 |       |       |        | 1,760  |
| Thailand                                                                                                                                                                                                   | 3,015  | 266   |       | 1,267 | 294    | 4,842  |
| Trinidad & Tobago                                                                                                                                                                                          |        | 998   | 1,364 | 4,096 | 189    | 6,647  |
| Turkey                                                                                                                                                                                                     | 27,289 |       |       |       |        | 27,289 |
| United Arab Emirates                                                                                                                                                                                       |        |       | 431   |       | 19,387 | 19,818 |
| United Kingdom                                                                                                                                                                                             |        | 256   |       |       | 6,093  | 6,349  |
| Venezuela                                                                                                                                                                                                  |        | 2,951 |       |       | 3,907  | 6,858  |
| * Countries importing a total of at least 1,000 animals during the 6-year period.                                                                                                                          |        |       |       |       |        |        |
| <u>Data Source:</u> Department of Commerce, U.S. Census Bureau, Foreign Trade Statistics, available at <a href="http://www.fas.usda.gov/gats/default.aspx">http://www.fas.usda.gov/gats/default.aspx</a> . |        |       |       |       |        |        |

### C. Mode of Transport and Length of Journey

Exported animals are transported by land, sea, air, or a combination of the three. It is assumed that many of the long distance exports involving large numbers of animals are sent via ship, while smaller numbers of animals are flown. The mode of transport for live animal exports is likely related to logistics and cost. Press accounts indicate that the shipments of dairy cattle to Turkey are going by sea. They have been leaving from seaports in Delaware and Maine, and the journey lasts about 16 days.<sup>25</sup> This does not include truck transport between the farm of origin and the exporting port, or between the importing port in Turkey and the final destination, which would likely extend the total transport time to more than three weeks.<sup>26</sup> Press accounts also project up to 60,000 additional cattle to be shipped to Turkey within the next year.<sup>27</sup>

According to a local newspaper in Eastport, Maine, where recent shipments to Turkey originated, at least two calves were born during a shipment of pregnant dairy cows that occurred in July 2010.<sup>28</sup> These births suggest that either the cows were too far along in their gestation to be safely and humanely transported, or that they gave birth prematurely, which could be an indicator of stress. While APHIS has implemented a specific health certificate for the export of female breeding cattle from the U.S. to Turkey, the form focuses on the risk of disease transmission and does not address other aspects of animal health or welfare.<sup>29</sup>

<sup>25</sup> SK Mack, Eastport cleared to export livestock, *Bangor Daily News*, July 16, 2010; SK Mack, Another 600 cattle to be shipped from Eastport to Turkey, *Bangor Daily News*, Oct. 1, 2010.

<sup>26</sup> Shipments from the Maine port have included pregnant dairy cows from as far away as Wisconsin and Pennsylvania. See L Bowman, From Eastport to Turkey, with love, *The Working Waterfront*, Sept. 2010.

<sup>27</sup> J Farwell, Milk and money: Many a hope is pinned on a deal to make dairy cows the next Maine export, *Mainebiz*, Nov. 1, 2010.

<sup>28</sup> *Id.* Bowman.

<sup>29</sup> *Origin Veterinary Health Certificate for the Exportation of Female Breeding Cattle from the U.S. to Republic of Turkey*, USDA-APHIS, 2007, available at [http://www.aphis.usda.gov/regulations/vs/iregs/animals/downloads/tu\\_bo\\_br.pdf](http://www.aphis.usda.gov/regulations/vs/iregs/animals/downloads/tu_bo_br.pdf) (last accessed Feb. 14, 2011).

Not all larger shipments go by sea. In October 2010 the first of 2,000 breeding beef cattle were flown from Fargo, North Dakota, to Astana, Kazakhstan, accompanied by a veterinarian and two animal handlers. The cattle had been raised in North Dakota, and the journey was expected to take 18 hours.<sup>30</sup> Ultimately 40,000 cattle are expected to make the trip to Kazakhstan.<sup>31</sup> Similarly, in December 2010, 1,400 breeding beef cattle were shipped, most by aircraft, from Billings, Montana, to southwestern Russia.<sup>32</sup>

## **VI. ARGUMENTS IN SUPPORT OF THE REQUESTED ACTION**

### **A. Negative Impacts of Long Distance Transport on Food Safety and Meat Quality**

A recent Food Safety Fact Sheet, produced by Dr. Marcos Rostagno of the USDA, Agricultural Research Service's Livestock Behavior Research Unit, argues for the existence of a connection between stress in farm animals and food safety. Transport is cited as a stress-inducing factor in this excerpt from the fact sheet:

“Additionally, most farm animals are transported at some stage in their lives. The handling, loading, transporting and unloading of animals can have substantial detrimental effects on their well-being by causing stress. Moreover, during this process, animals can be exposed to a range of challenging stimuli including increased human contact, transport (vibration, movement, and jogging), novel/unfamiliar environments, food and water restriction, changes in social structure (through separation and mixing during transport and/or at the final destination), and changes in climatic conditions (i.e., heat, cold). These challenges perturb the homeostasis of the animals and an adaptive response is activated in an attempt to restore balance.”<sup>33</sup>

Many stressful experiences of cattle, pigs, and sheep during long distance transport could ultimately affect human consumers through contaminated and poor quality meat, and thus animal welfare/health and human health are inextricably linked. According to Gary C. Smith, University Distinguished Professor in the Department of Animal Sciences, Colorado State University, “Stress before slaughter affects the microbiological contamination in the live animal by influencing the meat quality, which may result in a more contaminated carcass; in PSE [pale, soft, exudative] and DFD [dark, firm, dry] carcasses, microorganisms can grow better and/or to a great extent.”<sup>34</sup> Exposure to transport-related stress also leads to increased levels of foodborne

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<sup>30</sup> C BJORKE, When cows fly – North Dakota cattle head to Kazakhstan, *Bismarck Tribune*, Oct. 9, 2010; C BJORKE, On a cattle drive to Kazakhstan, *Bismarck Tribune*, Nov. 12, 2010.

<sup>31</sup> S PRASSO, Cows for Kazakhstan, *CNNMoney.com*, Feb. 3, 2011.

<sup>32</sup> M BROWN, Montana ships ‘instant ranch’ to Russian grasslands, *Associated Press*, Dec. 16, 2010.

<sup>33</sup> M ROSTAGNO, *Stress in Farm Animals and Food Safety: Is There a Connection?*, USDA, Agricultural Research Service, Livestock Behavior Research Unit, Fall 2010.

<sup>34</sup> GC SMITH, *Effect of Transport on Meat Quality and Animal Welfare of Cattle, Pigs, Sheep, Horses, Deer, and Poultry*, 2004, available at <http://www.grandin.com/behaviour/effect.of.transport.html> (last accessed Feb. 14, 2011).

pathogens in the animal's gastrointestinal tract and subsequent increased risk of carcass contamination.<sup>35</sup>

Studies show that increased incidence of contamination such as *Salmonella* spp. occurs in pigs during long distance transport.<sup>36,37</sup> Inappetence, or failure to eat, which accounts for a significant percent of all sheep deaths during transport, predisposes sheep to both salmonellosis and lesion development.<sup>38</sup> Regarding beef cattle, one study concludes contamination by zoonotic agents (e.g., *E. coli* O157:H7) is increased by movement of animals (transport) and environmentally-mediated transfer from animal to animal. Incidences increase for longer distances since pathogens can survive in the environment and on fomites for more than 24 hours. The study also notes that “the risk of transfer of pathogens to a carcass from [contaminated] cattle hide is high.”<sup>39</sup>

Transport was found to increase the prevalence and degree of *E. coli* O157:H7 contamination on hides in one research study,<sup>40</sup> and another study found a significant increase in shedding prevalence of *Salmonella* after transportation.<sup>41</sup> Furthermore, it has been reported that compromised animals such as non-preconditioned, weaned calves have higher *E. coli* fecal presence than other calf groups.<sup>42</sup>

Stressors during transport also contribute to problems with meat quality even when contamination is not present.<sup>43</sup> Meat quality problems include bruises and blemishes, which also signify the animals' rough experiences during travel. Bruising and DFD meat are the main problems caused by transport on cattle carcass/meat quality, and incidences increase for long-distance transport.<sup>44</sup> In pigs, acute distress from long distance transport can cause Porcine Stress Syndrome, a similar condition to Post Traumatic Stress Disorder (PTSD) in humans, which

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<sup>35</sup> *Id.* Rostagno.

<sup>36</sup> BR Berends *et al.*, Identification and quantification of risk factors in animal management and transport regarding *Salmonella* spp. in pigs, *International Journal of Food Microbiology*, 30:37-53 (1996).

<sup>37</sup> RE Isaacson *et al.*, Effect of transportation and feed withdrawal on shedding of *Salmonella typhimurium* among experimentally infected pigs, *American Journal of Veterinary Research*, 60:1155-1158 (1999).

<sup>38</sup> CJC Phillips, The welfare of livestock during sea transport, in MC Appleby *et al.*, *Long Distance Transport and Welfare of Farm Animals*, CAB International, 2008, p. 144 (citing Higgs *et al.*, 1993).

<sup>39</sup> GA Dewell *et al.*, Impact of transportation and lairage on hide contamination with *Escherichia coli* O157 in finished beef cattle, *Journal of Food Protection*, 71:1114-1118 (2008).

<sup>40</sup> TM Arthur *et al.*, Transportation and lairage environment effects on prevalence, numbers, and diversity of *Escherichia coli* O157:H7 on hides and carcasses of beef cattle at processing, *Journal of Food Protection*, 70:280-286 (2007).

<sup>41</sup> AL Reicks *et al.*, Impact of transportation of feedlot cattle to harvest facility on the prevalence of *Escherichia coli* O157:H7, *Salmonella*, and total aerobic microorganisms on hides, *Journal of Food Protein*, 65:931-936 (2007).

<sup>42</sup> *Id.* Dewell *et al.*

<sup>43</sup> *Id.* Smith.

<sup>44</sup> GA María, Meat quality, in Appleby *et al.*, *Long Distance Transport and Welfare of Farm Animals*, CAB International, 2008, p. 97.

affects meat quality.<sup>45</sup> In cattle, the most important disease associated with transport is “shipping fever,” a respiratory disease brought on by stress that also impacts meat quality.<sup>46</sup>

G. A. María, of the faculty of veterinary medicine, University of Zaragoza, Spain, concludes a discussion of meat quality by making the point that the absence of defects in meat is not an indication that the animals did not suffer:

“A very strong stress is required to have a visible effect on meat quality. When there are even small effects on the meat, it is clear that the animals have suffered, because other welfare criteria such as behavioural changes, physiological constants or plasmatic indicators are normally greatly affected. An absence of an effect on meat quality (i.e. no effect on pH) is not a clear sign of absence of suffering due to poor welfare.”<sup>47</sup>

## **B. Negative Impacts of Long Distance Transport on Animal Health and Welfare**

The following factors are common to long distance transport, and have been shown to have a significant impact on animals, consequently affecting human health and animal health and welfare: heat stress, inadequate ventilation, motion sickness, noise, and inappetence. These stressors may occur in various combinations and have additive and deleterious effects on the animals, particularly for compromised animals (e.g., pregnant animals and young animals).<sup>48</sup>

### **1. Heat Stress**

Heat problems occur during long distance sea transport because the numbers of animals on board, as well as the ship’s engines, generate a lot of heat. This is exacerbated by high ambient temperature, so heat stress is not an uncommon occurrence.<sup>49</sup> Because these factors remain constant on a ship around the clock, animals do not get a break from heat at night (when temperatures fall) like they would on land and thus may be affected more intensely.<sup>50</sup>

Heat stroke is the biggest welfare problem for cattle, with *Bos taurus* breeds being especially susceptible to heat stress. *B. taurus* cattle originated from the temperate climate of continental Europe and therefore have fewer skin folds than other cattle breeds such as *Bos indicus* that originated in warmer climates.<sup>51</sup> Skin folds increase heat loss due to the presence of more sweat glands. Because most dairy and beef cattle in the U.S. are *B. taurus* breeds, these animals are more susceptible to succumbing to heat stroke when transported over long distances than, for

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<sup>45</sup> *Id.* at 85-90.

<sup>46</sup> *Id.* Smith.

<sup>47</sup> *Id.* María at 104.

<sup>48</sup> *Id.*

<sup>49</sup> *Id.* Phillips at 145.

<sup>50</sup> *Id.* Phillips at 146.

<sup>51</sup> *Id.* Phillips at 145.

example, *B. indicus* cattle more commonly exported from Australia.<sup>52</sup> One study measured the death rate for cattle during sea transport from Australia to all destinations during 2004, and found all heat stroke deaths were in *B. taurus* breeds, even though Australia exports both *B. taurus* and *B. indicus* cattle.<sup>53</sup>

Yet the most at-risk group of cattle is young calves; they are unable to thermoregulate and succumb to the effects of temperature changes more readily than mature cattle. In one study, calves subjected to hot conditions panted and “their body temperature increased continuously, which would have lead to collapse from heat stress.”<sup>54</sup> Another study found that transportation stress on young calves continued post-transport.<sup>55</sup> Non-stressed calves with bedding and full feed are thermally comfortable between 13°C and 26°C. Yet during long distance transport, other stressors contribute to calves having a narrower range of comfortable temperatures, increasing the likelihood of stress from climate.<sup>56</sup>

Young pigs can also be affected by heat stress. One study noted that “poor doers, piglets which had not regained their weaning weight by seven days post-weaning, were most common after summer transport” (as opposed to winter transport).<sup>57</sup> Additionally, high temperatures (35°C) caused delayed recovery of body reserves lost during transport.<sup>58</sup>

## 2. Inadequate Ventilation

As noted, heat stress is a primary concern for cattle during long distance transport, and inadequate ventilation contributes to heat problems, especially when stocking density is high.<sup>59</sup> Additionally, ventilation may vary in different pens on a ship, so some animals are subjected to more heat stress than others. Ventilation on open decks is subject to wind conditions; it is poorest when a ship is close to port and there are inadequate crosswinds. Ventilation is also subject to factors such as the proximity of the engine, level of natural and forced ventilation, and the type of animals enclosed within the pen.<sup>60</sup>

Besides contributing to heat stress, another major problem of poor ventilation is ammonia accumulation. Stocking density, nitrogen content of feed, ambient temperature, and pH of urine

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<sup>53</sup> EN Sossidou *et al.*, *Welfare Aspects of the Long Distance Transportation of Cattle*, available at

<sup>53</sup> EN Sossidou *et al.*, *Welfare Aspects of the Long Distance Transportation of Cattle*, available at <http://www.usab-tm.ro/fileadmin/fzb/simpozion%202009/Volumul2/AWF/Sossidou2.pdf> (last access Feb. 8, 2011).

<sup>54</sup> C Weeks, *UK Calf Transport and Veal Rearing. A Report for Compassion in World Farming*, March 2007, available at [http://www.ciwf.org.uk/includes/documents/cm\\_docs/2008/u/uk\\_calf\\_transport\\_and\\_veal\\_rearing.pdf](http://www.ciwf.org.uk/includes/documents/cm_docs/2008/u/uk_calf_transport_and_veal_rearing.pdf) (last accessed Feb. 14, 2011).

<sup>55</sup> *Id.* Weeks.

<sup>56</sup> *Id.* Weeks.

<sup>57</sup> NJ Lewis *et al.*, *Transportation of Early Weaned Piglets: Production and Welfare Aspects*, available at <http://www.gov.mb.ca/agriculture/livestock/pork/pdf/bab19s04.pdf> (last access Jan. 6, 2011).

<sup>58</sup> *Id.*

<sup>59</sup> *Id.* Phillips at 146.

<sup>60</sup> *Id.*

all contribute to ammonia concentration on a ship during long distance transport.<sup>61</sup> One study recommends ammonia levels no greater than 20 parts per million (“ppm”) for live export vessels based on the observance of immune response at this level in cattle.<sup>62</sup> Yet welfare may be reduced at much lower levels of ammonia, as one study shows pigs prefer fresh air to even 10 ppm ammonia concentration.<sup>63</sup>

### 3. Motion Sickness

Various studies have documented behavioral evidence of motion sickness in pigs during transport. Pigs will retch or vomit during transport when certain vibrations are present.<sup>64</sup> In a paper on the welfare of pigs during transport and slaughter, animal handling expert Dr. Temple Grandin reviews the evidence of motion sickness in pigs:

“Vibration in a vehicle is uncomfortable to pigs and they will vomit during transport (Bradshaw *et al.*, 1996). Vibration may be more aversive than noise (Stephens *et al.*, 1985). Perremans *et al.* (2001) found that low frequency vibrations of 2 to 4 hz was more stressful than 8 to 18 hz. At 2 to 4 hz pigs spent 10 times less time lying down.”<sup>65</sup>

Because ruminants rarely vomit, cattle and sheep may not show retching but might still be affected by motion sickness.<sup>66,67</sup> The European Commission reports that “when the ships are rolling and pitching in the sea the lorries are moving accordingly. Particularly in the upper decks of lorries on the main deck the forces are very strong and the animals can develop motion or travel sickness.”<sup>68</sup>

### 4. Noise

A variety of novel stimuli cause stress in farmed animals. For example, noise can be a welfare concern. On ships, most of the noise comes from ventilation fans, which may be situated close to some animals. Calves in particular have been reported to be stressed as much by transport noise as by transport generally.<sup>69</sup>

Temple Grandin reports on the studies about the effects of noise on pig welfare:

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<sup>61</sup> *Id.* Phillips at 149.

<sup>62</sup> *Id.*

<sup>63</sup> *Id.* Phillips at 150, citing Kristensen and Wathes, (2000); Kristensen *et al.*, (1976); Tudor *et al.*, (2003).

<sup>64</sup> European Commission. *Report of the Scientific Committee on Animal Health and Animal Welfare. The Welfare of Animals During Transport (Details for Horses, Pigs, Sheep, and Cattle)*, adopted on March 11, 2002.

<sup>65</sup> T Grandin, *Pig Welfare during Transport and Slaughter*, available at <http://www.grandin.com/references/pig.welfare.during.transport.slaughter.html> (last accessed Feb. 14, 2011).

<sup>66</sup> *Id.* European Commission.

<sup>67</sup> *Id.*

<sup>68</sup> *Id.*

<sup>69</sup> *Id.* Phillips at 150, citing Agnes *et al.*, 1990.

“Pigs also will remain calmer if there is less noise. Spensley (1995) reported that novel noises ranging from 80 to 90 dB increased the heart rate of pigs. Intermittent noises were more disturbing to pigs than continuous noises (Talling *et al.*, 1998). Air exhausts that hiss should be muffled and clanging metal should be silenced (Grandin, 1996). Geverink *et al.* (1998a) studied the response of pigs to recorded sounds of machinery or white noise. Pigs exposed to the loud 85 dB sound spent more time close to group mates.”<sup>70</sup>

## 5. Inappetence

Inappetence has been identified as a major stressor for sheep during transport by sea.<sup>71</sup> One source reports that this persistent failure to eat accounts for nearly 50 percent of all deaths in sheep during transport by sea. Inappetence occurs when sheep fail to adjust to the concentrated pellet feed they are given during transport after having become accustomed to a pasture-based diet.<sup>72</sup>

Evidence suggests that pigs also suffer from inappetence, as pigs who are severely distressed during transport have large live-weight losses of 40 to 60 g/kg according to one study.<sup>73</sup>

### C. Special Risks of Long Distance Transport to Compromised Animals

Certain categories of animals are more susceptible to health and welfare risks from the stressors involved in transport and, therefore, are *least* fit to travel. These compromised groups of animals include pregnant animals (e.g., dairy cows and dairy heifers) and young animals, such as calves, piglets, and lambs.

#### 1. Young Animals

Numerous studies conclude that young calves are not fit for long distance travel.<sup>74</sup> Their immune systems are not fully developed and they are unable to regulate their body temperatures on their own, so they are susceptible to the stresses of various factors, including heat and cold, vibration, and acceleration. Weight loss, morbidity, and mortality following transport indicate calves are exposed to a variety of stressors. These outcomes, and thus the intensity of the stressors, increase for longer journeys.<sup>75</sup>

Calves less than two weeks old have high rates of morbidity and mortality. Even calves between two and four weeks of age have increased susceptibility to disease; they do not show typical

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<sup>70</sup> *Id.* Grandin.

<sup>71</sup> *Id.* Phillips at 137, citing study from Australia in 2005.

<sup>72</sup> *Id.* Phillips at 144.

<sup>73</sup> *Id.* Smith.

<sup>74</sup> *Id.* Sossidou *et al.* at 616.

<sup>75</sup> *Id.* Weeks.

physiological stress responses, yet do not tolerate transport as well as older cattle.<sup>76,77</sup> Shipping fever and diarrhea are major contributors to calf morbidity and mortality from transport.<sup>78</sup> One study reports that “transporting and handling calves the first four to seven days after weaning could be a critical factor in the development of the ‘shipping fever complex’; during this period, the calves appear to be more susceptible to invasion by the causative agent.”<sup>79</sup> Additionally, pneumonia was identified as the greatest cause of death in transported calves in a survey by Staples and Hauge.<sup>80</sup> This is in contrast to generally low transport mortality in mature beef cattle.<sup>81</sup>

Temple Grandin also emphasizes that “[beef feeder] calves that are unvaccinated and have not recovered from weaning stresses are not fit for transport.”<sup>82</sup> Grandin reports that young Holstein calves are even weaker than calves bred for meat. She reports observing Holstein calves not able to walk without assistance from a person.<sup>83</sup> Therefore, dairy calves from one day old to one week old are not fit for transport, in particular when the transport is lengthy.

Young pigs under three weeks of age are also highly compromised during long distance transport. Several studies show that early weaned piglets (i.e. 20 days old and younger), who are transported for journeys of 24 hours, have compromised post-weaning welfare with transport itself having additive and deleterious effects.<sup>84,85</sup> Most long distance transport out of the United States tends to last much longer than the 24 hour maximum time period that research studies often measure, and these studies predict that longer travel duration would be even more problematic for young pigs, with various other factors adding to the stresses of transport and early weaning. Factors such as high stocking density and dehydration contribute to welfare problems when compounded with heat and travel. Research by Lewis *et al.* concludes that the incidence of “poor doers,” or those piglets who don’t regain their weaning weight by seven days post transport, will increase with stressful transport (which is increased by duration of journey).<sup>86</sup>

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<sup>76</sup> In a study (Morreale *et al.*, 1982), very young calves, less than 4 weeks old, were shown not to react to transport with a large HPA (hypothalamic-pituitary-adrenal) response. HPA results in increased concentrations of glucose, cortisol, and NEFA (non-esterified fatty acids) in the blood, which scientists can measure as an indication of stress. JC Swanson & J Morrow-Tesch, Cattle transport: Historical, research, and future perspectives, *Journal of Animal Science*, 79:E102-E109 (2001).

<sup>77</sup> *Id.* at E102.

<sup>78</sup> *Id.* Smith.

<sup>79</sup> *Id.*

<sup>80</sup> *Id.* Swanson & Morrow-Tesch at E104.

<sup>81</sup> *Id.*

<sup>82</sup> T Grandin, Perspectives on transportation issues: The importance of having physically fit cattle and pigs, *Journal of Animal Science*, 79:E201-207 (2001).

<sup>83</sup> *Id.* Grandin at E204.

<sup>84</sup> *Id.* Lewis.

<sup>85</sup> X Averós *et al.*, Factors affecting the mortality of weaned piglets during commercial transport between farms. *Veterinary Record*, 167:815-819 (2010).

<sup>86</sup> *Id.* Lewis. The animal welfare problems associated with the transport of young animals is detailed in a report by the international animal advocacy organization Animals’ Angels, which supports limiting the transport of unweaned



## 2. Pregnant Animals

It is prudent to transport pregnant animals early in the term, whereas animals who are likely to give birth during the journey should be refused entirely from transport. Numerous studies report that animals in late stages of pregnancy and those about to give birth should not be transported.<sup>87</sup>

Risks are even greater in heifers (than cows) because they tend to have shorter pregnancies. Also, more heifers are transported when pregnant for the purposes of exporting breeding cattle, so risks are statistically higher. Moreover, the physical immaturity of most pregnant heifers makes them even more susceptible to the stresses of long distance transport.<sup>88</sup> All of the factors outlined above (heat stress, inadequate ventilation, motion sickness, noise, and inappetence) can contribute to health and welfare problems, plus additional factors that become problematic for pregnant animals, such as interruption in food and water intake that may not have as detrimental an effect on mature non-pregnant animals.<sup>89</sup> “Evidence indicates some heifers experience significant negative energy balance during transport, while others suffer from dehydration,” according to an article on the health and welfare of dairy cattle transported in late pregnancy posted on TheCattleSite.com.<sup>90</sup> Moreover, transport by sea can cause abortion in cattle when the sea is rough, and the abortion rate increases with increasing winds.<sup>91</sup>

### D. Special Risks Associated with International Transport

The transport of live animals – regardless of whether it is by sea, land, or air – is associated with risks that have the potential to negatively impact animal welfare. The longer the duration of the journey and the greater the number of animals transported, the higher the risk. International shipments generally present the riskiest type of transport given that they often involve large numbers of animals traveling for a period of many days, weeks, or even months. When something goes wrong on these trips, thousands of animals can suffer and/or die in a very short period of time. Due to the risks involved, it is imperative that only fit animals be transported.

Transport disasters are most often associated with long distance transport by sea, but emergencies and mishaps occur with land and air transports as well. Some causes of transport disasters include lengthy delays in loading and unloading, extreme weather, equipment malfunction, and disease outbreaks. In rare cases, all lives may be lost when a fire breaks out onboard or when a plane goes down, vessel sinks, or vehicle crashes. More commonly, animals suffer and die due to stress resulting from the failure of ventilation equipment or the combination

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animals to journeys of eight hours or less. See *Animals’ Angels, Long Distance Transport of Unweaned Animals*, Aug. 2008.

<sup>87</sup> *Id.* Smith.

<sup>88</sup> *Health and Welfare of Dairy Cattle Transported in Late Pregnancy*, TheCattleSite.com, available at <http://www.thecattlesite.com/articles/2580/health-and-welfare-of-cattle-transported-in-late-pregnancy> (last accessed Feb. 14, 2011).

<sup>89</sup> *Id.*

<sup>90</sup> *Id.*

<sup>91</sup> *Id.* European Commission.

of high temperatures and high humidity. Delays in loading and unloading is a particular problem with international sea shipments due to the frequent occurrence of financial or other disputes between parties at foreign ports of embarkation or debarkation.

Table 3 below presents examples of animal transport disasters at sea.

| <b>Table 3. Transport Disasters at Sea<br/>1990 - 2010</b> |             |                                                                                                                                                                                                          |
|------------------------------------------------------------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Cause</b>                                               | <b>Date</b> | <b>Description</b>                                                                                                                                                                                       |
| <b>Delay in Loading/Unloading</b>                          | 1998        | Some 280 goats and 150 cattle died when the ocean vessel <i>Anomis</i> was prevented from unloading in Malaysia for over 2 weeks due to a financial dispute between the exporter, shipper, and importer. |
|                                                            | 2003        | 6,000 sheep died during a 3-month voyage on the <i>Cormo Express</i> when no country would accept the animals due to disease concerns.                                                                   |
|                                                            | 2004        | 3,300 cattle languished onboard the <i>Maysora</i> when the vessel was delayed at a port in Jordan for almost a week due to a dispute regarding feedlot space.                                           |
|                                                            | 2006        | 862 sheep died on a month-long voyage when a suspected scabie mouth outbreak from an earlier shipment prevented the animals from being unloaded.                                                         |
|                                                            | 2007        | 3,500 Australian cattle were stuck onboard a ship docked at a port in Israel due to an agriculture and veterinary workers strike.                                                                        |
|                                                            | 2010        | 263 cattle onboard the <i>Ocean Shearer</i> died when the voyage from Western Australia to Egypt took 15 days longer than expected because of injury to a crew member and piracy concerns.               |
| <b>Extreme Weather</b>                                     | 1990        | Almost 10,000 sheep died on the <i>Cormo Express</i> on route from New Zealand to the Middle East due to inadequate ventilation that caused heat stroke, pneumonia, and other diseases.                  |
|                                                            | 1996        | 1,592 cattle drowned when the <i>Guernsey Express</i> sank after taking on water during a voyage from Australia to Japan.                                                                                |
|                                                            | 1998        | 346 cattle were reported to have died due to inadequate ventilation when the <i>Charolais Express</i> hit bad weather on route from Australia to Jordan.                                                 |
|                                                            | 1999        | Over 300 cattle aboard the <i>Kalymnian Express</i> died or were injured when the ship encountered a cyclone off the coast of Western Australia.                                                         |
|                                                            | 2002        | 99 cattle died on the <i>Norvantes</i> on route from Australia to Jakarta when the ship met bad weather.                                                                                                 |
|                                                            | 2002        | 880 cattle and 1,400 sheep died onboard the <i>Becrux</i> after the vessel encountered extreme temperatures and humidity in the Arabian Gulf.                                                            |
|                                                            | 2007        | 68 cattle died when the ship carrying them to Jakarta was battered by a cyclone.                                                                                                                         |
|                                                            | 2009        | 28,000 cattle and sheep being transported from Uruguay to Syria drowned when the <i>Danny F II</i> hit severe storms and sank.                                                                           |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |      |                                                                                                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|--------------------------------------------------------------------------------------------------------------------------------|
| <b>Power Failure</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1999 | 829 cattle suffocated during a voyage from Australia to Indonesia as a result of ventilation failure on the <i>Temburong</i> . |
| <b>Disease Outbreak</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 2006 | 6 cattle and 1,683 sheep died due to heat stress and failure to eat, exacerbated by an outbreak of pink eye infections.        |
| <b>Fire Onboard</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1996 | 67,488 sheep died when fire broke out onboard the <i>Uniceb</i> .                                                              |
| <u>Source:</u> Royal Society for the Prevention of Cruelty to Animals – Australia, <i>History of Disasters at Sea</i> , no date, available at <a href="http://www.rspca.org.au/how-you-can-help/campaigns/live-exports/history-of-disasters-at-sea.html">http://www.rspca.org.au/how-you-can-help/campaigns/live-exports/history-of-disasters-at-sea.html</a> ; Animals Australia, <i>Live Export: Litany of Disasters</i> , no date, available at <a href="http://www.liveexport-indefensible.com/facts/litany.php">http://www.liveexport-indefensible.com/facts/litany.php</a> . |      |                                                                                                                                |

Unfortunately, morbidity and mortality data for U.S. live animal exports are not readily available to the petitioners. However, data for a long-distance sea journey that pigs travel from Oakland or Long Beach, California, to Honolulu, Hawaii are available. Each year more than 10,000 pigs are shipped on this voyage lasting four to five days.<sup>92</sup> Mortality data, which are provided by the Hawaii Department of Agriculture’s Shipmaster’s Declaration form, are summarized below:

| <u>Year</u> | <u>Mortality</u>    |
|-------------|---------------------|
| 2006        | 0.51%               |
| 2007        | 0.87%               |
| 2008        | 0.37%               |
| 2009        | 0.22%               |
| 2010*       | 0.55% <sup>93</sup> |

\* Through Oct. 31<sup>st</sup>.

The average mortality for the five-year period, 2006 through 2010, is 0.51%,<sup>94</sup> while the average mortality from transport-related causes for domestic pigs transported by truck within the U.S. is 0.25%.<sup>95</sup> The significantly higher mortality on the California-to-Hawaii shipments suggests that either the mode of transport or the length of transport, or both, increases mortality and reinforces the need for fitness to travel requirements for animals embarking on similar journeys.<sup>96</sup>

<sup>92</sup> World Society for the Protection of Animals (WSPA), *No Paradise for Pigs*, in print. The stated journey length of 4-5 days is for the sea voyage only and does not include truck transport to and from the ports.

<sup>93</sup> World Society for the Protection of Animals (WSPA), unpublished data.

<sup>94</sup> This statistic likely underestimates the actual mortality since the data is derived from the sea segment of the trip only and do not include pigs found dead on arrival at the slaughter plant outside Honolulu.

<sup>95</sup> MJ Ritter *et al.*, Transport losses in market weight pigs: 1. A review of definitions, incidence, and economic impact, *The Professional Animal Scientist*, 25:404-414 (2009). The incidence of pigs dead on arrival at U.S. slaughterhouses was found to be 0.25%, both for statistics reported by the USDA, Food Safety and Inspection Service and for a summary of 23 commercial field trials covering 6.6 million pigs.

<sup>96</sup> “However, mortality rates are a very blunt instrument when it comes to assessing animal welfare. Those animals that die on an export journey are at the most extreme end of a scale of suffering: animals can suffer during the export journey in many ways that do not result in death.” MW Fisher & BS Jones, Australia and New Zealand, *in* MC Appleby *et al.*, *Long Distance Transport and Welfare of Farm Animals*, CAB International, 2008, p. 346.

## E. Need to Harmonize Country Laws Affecting International Trade

Canada, America's largest trading partner for live animals and animal products, has fitness for travel criteria for the transportation of animals entering or leaving Canada and within Canada. Canadian transportation of animals regulations stipulate "no person shall load or cause to be loaded on any railway car, motor vehicle, aircraft or vessel" an animal "that by reason of infirmity, illness, injury, fatigue or any other cause cannot be transported without undue suffering during the expected journey" or "if it is probable that the animal will give birth during the journey."<sup>97</sup> In addition, a guidance from the Canadian Food Inspection Agency regarding the transportation of animals places compromised animals into two categories – "those that can't be transported and those that can only be transported with special provisions."<sup>98</sup> Examples of conditions where animals must not be transported include animals unable to stand without assistance, a fracture that hampers mobility, dehydration, and exhaustion.<sup>99</sup>

Of the top ten countries (by U.S. dollar value) that exported live animals to the U.S. in 2010, excluding Canada and Mexico, seven possess fitness to travel requirements.<sup>100</sup> Six of these countries are members of the European Union which possesses the following fitness for transport rule:

1. No animal shall be transported unless it is fit for the intended journey, and all animals shall be transported in conditions guaranteed not to cause them injury or unnecessary suffering.
2. Animals that are injured or that present physiological weaknesses or pathological processes shall not be considered fit for transport and in particular if:
  - (a) they are unable to move independently without pain or to walk unassisted;
  - (b) they present a severe open wound, or prolapse;
  - (c) they are pregnant females for whom 90% or more of the expected gestation period has already passed, or females who have given birth in the previous week;
  - (d) they are new-born mammals in which the navel has not completely healed;
  - (e) they are pigs of less than three weeks, lambs of less than one week and calves of less than ten days of age, unless they are transported less than 100 km;
  - (f) they are dogs and cats of less than eight weeks of age, unless they are accompanied by their mother;

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<sup>97</sup> *Regulations Respecting the Health of Animals* (C.R.C., c. 296), Part XII.

<sup>98</sup> Canadian Food Inspection Agency, *Livestock Transport Requirements in Canada: Your Responsibility*, March 4, 2008, available at [www.inspection.gc.ca/english/anima/trans/transpoe.shtml](http://www.inspection.gc.ca/english/anima/trans/transpoe.shtml) (last accessed Feb. 14, 2011).

<sup>99</sup> *Id.*

<sup>100</sup> The top 10 countries include the Netherlands, Germany, China, Ireland, United Kingdom, Belgium-Luxembourg, Mauritius, Australia, France, and Cambodia, according to the USDA, Foreign Agricultural Service, Global Agricultural Trade System database, available at [www.fas.usda.gov/gats/default.aspx](http://www.fas.usda.gov/gats/default.aspx).

(g) they are corvine animals in velvet.<sup>101</sup>

Australia – another of the top ten countries exporting to the U.S. – possesses extensive fitness requirements for the sourcing of animals for export by air and sea. The export by sea standards include a total of 43 specific rejection criteria, organized by the following categories: general requirements, systemic conditions, musculoskeletal system, gastrointestinal system, nervous system, external/skin, head, and other.<sup>102</sup> Examples of conditions that result in rejection for export include “lactating animals,” “emaciated or over fat,” “lameness or abnormal gait,” “generalized skin disease,” “discharging wounds or abscesses,” “cancer eye,” “coughing,” and “nasal discharge.”<sup>103</sup> Regarding minimum age, cattle must have been weaned at least 14 days and must have reached an individual live-weight of more than 200 kg before sourcing for export.<sup>104</sup> Lambs and goat kids must have been weaned at least 14 days and have reached live-weights of 28 and 22 kg, respectively, before sourcing for export.<sup>105</sup> Breeding cattle sourced for export must be pregnancy tested and certified in writing as no more than a maximum of 190 days pregnant for export by sea<sup>106</sup> and 250 days pregnant for export by air<sup>107</sup> at the scheduled date of departure. Breeding sheep and goats sourced for export must be pregnancy tested and certified by written declaration to be not more than a maximum of 100 days pregnant for export by sea<sup>108</sup> and 115 days pregnant for export by air<sup>109</sup> at the scheduled date of departure.

In 2005, the World Organisation for Animal Health (“OIE”) adopted animal welfare standards for the transport of animals by sea,<sup>110</sup> land,<sup>111</sup> and air.<sup>112</sup> The standards for transport by sea include the following fitness to travel requirements:

- a) Animals should be inspected by a veterinarian or an animal handler to assess fitness to travel. If its fitness to travel is in doubt, it is the responsibility of a veterinarian to determine its ability to travel. Animal found unfit to travel should not be loaded onto a vessel.

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<sup>101</sup> Official Journal of the European Union, *Council Regulation (EC) No 1/2005 of 22 December 2004 on the Protection of Animals During Transport and Related Operations*, Annex I, Chapter I, Jan. 5, 2005.

<sup>102</sup> Australian Government, Department of Agriculture, Fisheries and Forestry, *Standards for the Export of Livestock* (Version 2.2).

<sup>103</sup> *Id.*

<sup>104</sup> *Id.* Standard S1.9.

<sup>105</sup> *Id.* Standard S1.12.

<sup>106</sup> *Id.* Standard S1.10.

<sup>107</sup> *Id.* Standard S6.6.

<sup>108</sup> *Id.* Standard S1.13.

<sup>109</sup> *Id.* Standard S6.6.

<sup>110</sup> World Organization for Animal Health, *Terrestrial Animal Health Code*, Chapter 7.2, *Transport of Animals by Sea*.

<sup>111</sup> World Organization for Animal Health, *Terrestrial Animal Health Code*, Chapter 7.3, *Transport of Animals by Land*.

<sup>112</sup> World Organization for Animal Health, *Terrestrial Animal Health Code*, Chapter 7.4, *Transport of Animals by Air*.

- b) Humane and effective arrangements should be made by the owner or agent for the handling and care of any animal rejected as unfit to travel.
- c) Animals that are unfit to travel include, but may not be limited to:
  - i) those that are sick, injured, weak, disabled or fatigued,
  - ii) those that are unable to stand unaided or bear weight on each leg,
  - iii) those that are blind in both eyes,
  - iv) those that cannot be moved without causing them additional suffering;
  - v) newborn with an unhealed navel,
  - vi) females travelling without young which have given birth within the previous 48 hours,
  - vii) pregnant animals which would be in the final 10% of their gestation period at the planned time of unloading, and
  - viii) animals with unhealed wounds from recent surgical procedures such as dehorning.<sup>113</sup>

Fitness requirements for the transport of animals by land are similar to the above with two exceptions. “Animals with unhealed wounds from recent surgical procedures such as dehorning” are not listed as unfit to travel but as being “at particular risk of suffering poor welfare during transport and which require special conditions.”<sup>114</sup> Transport by land standards also include the following rejection criteria not found in the standards for sea transport: “Those whose body condition would result in poor welfare because of the expected climatic conditions.”<sup>115</sup> The OIE transport by air standards do not address fitness to travel, with the exception of the following recommendations for pregnant animals:

Heavily pregnant animals should not be carried except under exceptional circumstances. Pregnant animals should not be accepted when the last service or exposure to a male prior to departure has exceeded the following time given here for guidance only:

|        |                        |
|--------|------------------------|
| Horses | 300 days               |
| Cows   | 250 days               |
| Sheep  | 115 days               |
| Goats  | 115 days               |
| Pigs   | 90 days <sup>116</sup> |

The OIE was established in 1924 to address animal diseases at the global level and is now known as the intergovernmental organization responsible for improving animal health. It is recognized

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<sup>113</sup> *Id.* World Organization for Animal Health, Terrestrial Animal Health Code, 7.2.3.

<sup>114</sup> *Id.* World Organization for Animal Health, Terrestrial Animal Health Code, 7.3.3.

<sup>115</sup> *Id.*

<sup>116</sup> *Id.* World Organisation for Animal Health, Terrestrial Animal Health Code, 7.4.2.

by the World Trade Organization (WTO), and in early 2011 had a total of 178 Member Countries and Territories, including the United States.<sup>117</sup> In recent years the scope of the organization's mission has been expanded to include animal welfare.<sup>118</sup> Numerous governmental and non-governmental agencies, academic institutions, and scientists have praised the OIE standards for animal welfare and urged their adoption by Member Countries.<sup>119</sup>

Establishing fitness to travel requirements, through adoption of the OIE standards for the transport of animals, would help bring the U.S. in line with OIE recommendations for animal health and animal welfare, and with the legal export standard of some of America's largest international agriculture trading partners.

#### **F. Current U.S. Live Animal Export Regulations Are Vague and Subjective**

As noted previously, the current livestock exportation regulations require that animals for export be given "a careful visual health inspection."<sup>120</sup> The regulations further state that in order for an export certificate, VS Form 17-37, to be issued, an APHIS veterinarian at the export inspection facility must find the animal to be "sound, healthy, and free from evidence of communicable disease or exposure thereto."<sup>121</sup> While the health and disease state of the animal may be judged at least in part by the health certificate from the State of origin,<sup>122</sup> no definition of the term "sound" exists. There is currently no indication of which conditions, if found upon the required visual health inspection, would disqualify an animal from exportation. Consequently the regulation is overly vague and subjective. Specific fitness criteria are required in order to ensure consistent application of the regulation by all APHIS veterinarians at export inspection facilities.

### **VII. PROPOSED REGULATION**

Petitioners propose that amendments be made to three sections of the Inspection and Handling of Livestock for Exportation regulations (9 C.F.R. Part 91), as indicated below. (The new language to be added is identified by underscoring.)

9 C.F.R. §91.15 Inspection of animals for export.

(b) Such animals shall be held for a period of not less than 5 hours at a port of embarkation or export inspection facility during which time the animals shall be given a

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<sup>117</sup> OIE, *About Us*, available at <http://www.oie.int/about-us/> (last accessed Feb. 14, 2011).

<sup>118</sup> "As a mark of the close relationship between animal health and animal welfare, the OIE has become, at the request of its Member Countries, the leading international organisation for animal welfare." OIE, *Our Missions*, available at <http://www.oie.int/about-us/our-missions/> (last accessed Feb. 14, 2011).

<sup>119</sup> "The OIE guidelines are basic minimum standards that every country should comply with." T Grandin, *Global Input*, MeatPoultry.com, Feb. 2, 2010, available at <http://www.meatpoultry.com/en/Writers/Dr%20Temple%20Grandin/Global%20input.aspx?p=1> (last accessed Feb. 14, 2011).

<sup>120</sup> 9 C.F.R. § 91.15.

<sup>121</sup> 9 C.F.R. § 91.16.

<sup>122</sup> 9 C.F.R. § 91.3(a).

careful visual health inspection. Animals unfit to travel, include, but may not be limited to:

(1) animals sick, injured, weak, disabled or fatigued,

(2) animals unable to stand unaided or bear weight on each leg,

(3) animals blind in both eyes,

(4) those for whom movement would cause additional suffering,

(5) newborns with an unhealed navel,

(6) pigs of less than three weeks, lambs of less than one week, and calves of less than ten days of age,

(7) females having given birth within the previous 48 hours and travelling without young,

(8) pregnant animals in the final 10% of their gestation period at the planned time of unloading, and

(9) animals with unhealed wounds from recent surgical procedures such as dehorning.

Humane and effective arrangements must be made by the owner or agent for the prompt euthanasia or care of any animal rejected as unfit to travel.

Sorting, grouping, identification, or other handling of the animals by the exporter may be before or after this period of time. If individual clinical inspection of an animal is deemed necessary by an APHIS veterinarian for the purpose of determining its health status, such inspection shall be made during this period of time or thereafter.

#### 9 C.F.R. §91.16 Certification of animals for export.

If, upon inspection by an APHIS veterinarian at the export inspection facility, the animals offered for export are found to be sound according to §91.15(b), healthy, and free from evidence of communicable disease or exposure thereto, an export certificate, VS Form 17-37, shall be issued by said APHIS veterinarian and shall contain a statement to that effect.

#### 9 C.F.R. §91.17 Accommodations for humane treatment of animals on ocean vessels.

(b) Owners, masters, or operators of such vessels shall not accept for transportation any animal that is deemed unfit to travel according to §91.15(b) or in the judgment of the APHIS veterinarian is in an unfit condition to withstand the rigors of such transportation. Further, no animal intended for export shall be placed aboard any ocean vessel, unless in the opinion of the inspector the loading arrangements, fittings, ventilation systems, and the arrangements provided by the vessel for their use reasonably assure arrival of a viable animal in the country of destination. Halters, ropes, or other suitable equipment provided for the handling and tying of horses shall be found to be satisfactory by the APHIS veterinarian to assure humane treatment of the animals.



## **VIII. CONCLUSION**

There is ample evidence, as described above, that transport is a cause of significant stress to farmed animals and that only the fittest should be allowed to embark on extended journeys. While fitness to travel requirements are needed for transport that takes place both within and without the country, it is most important that these restrictions be implemented for international exports, which are typically longer and more likely to involve risks to animal welfare. Accordingly, petitioners urge the USDA to initiate rulemaking to amend the “exportation of animals” regulations by adopting the fitness to travel requirements contained in the OIE standards for the transport of animals. As shown, USDA has clear authority to do so under both the Federal Meat Inspection Act and the Animal Health Protection Act. Implementation of fitness to travel requirements will serve to protect the foreign commerce of the United States, help harmonize country laws dealing with international transports, clarify the current regulation on animal exports, reduce animal suffering, and protect both human and animal health.

Respectfully submitted,

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