

ANIMAL WELFARE IN PACKING PLANTS: AN OVERVIEW

Background

Many religious laws from different faiths have formed the basis for modern livestock processing practices. One common theme among all faiths has been a respect for animals, avoidance of animal suffering and appreciation for the nourishment that they provide. These themes permeate the practices of the meat packing industry.

In 1958, Congress passed the Humane Slaughter Act, which laid out specific rules for livestock treatment in meat plants that sold meat products to the federal government. In 1978, the law was reauthorized and expanded to cover all federally inspected meat plants (except those performing religious slaughter). Beginning in the early 1990s, the meat industry embarked on a proactive effort to enhance animal welfare in meat plants.

Working with leading experts, including Dr. Temple Grandin, professor of animal science at Colorado State University, the industry began to embrace the idea that enhanced welfare not only was ethically appropriate, it had distinct additional benefits, including:

- **Enhanced meat quality.** Calm animals produce better meat products with fewer quality defects.
- **Enhanced plant efficiency.** Animals that are calm and humanely handled move easily through processing plants.
- **Improved worker safety.** Calm livestock reduce the chance that an employee will become injured by an animal.
- **Enhanced morale.** When animals are handled humanely, employees tend to have better attitudes toward their jobs.

Government Oversight

The U.S. meat industry is one of the most heavily regulated industries in the nation. Thousands of pages of regulations govern every aspect of the meat packing business, including how livestock are treated. The Humane Slaughter Act of 1978 dictates strict animal handling and slaughtering practices for packing plants. Those standards are monitored by Food Safety and Inspection Service (FSIS) inspectors nationwide, who are present in packing plants during every minute of operation. FSIS inspectors are empowered to take action in a plant any time they identify a violation of the Act.

Humane slaughter rules require:

- That animals must be handled and moved through chutes and pens in ways that do not cause stress.
- That livestock must be rendered insensible to pain prior to slaughter. The Act details the methods that must be used to stun animals.
- That animals must have access to water and that those kept longer than 24 hours must have access to feed.
- That animals kept in pens overnight must be permitted plenty of room to lie down.
- That non-ambulatory livestock in the stockyards, crowd pens or stunning chutes may not be dragged.

These comprehensive federal requirements are the minimum standards for animal welfare. Industry's own voluntary standards take federal requirements a step further.

Voluntary Efforts and Audits

In 1991, the industry asked Dr. Temple Grandin to author the landmark *Recommended Animal Handling Guidelines for Meat Packers*. Five years later, Dr. Grandin completed an audit of meat packing plants for the U.S. Department of Agriculture and concluded that animal welfare evaluations need not be subjective. Rather, she said they could be measured using objective numeric criteria.

In 1997, AMI asked Dr. Grandin to develop a new audit tool using objective criteria that could be used by plants to monitor their own animal welfare practices. She developed *Good Management Practices for Animal Handling and Stunning* and the "AMI audit" was born. Soon, the audit program was embraced by leading quick service restaurant chains and later by major retailers, and plants began conducting routine self audits.

As part of the audits, plants measure criteria that include:

- Livestock vocalizations that may indicate stress
- Falls that can cause injury
- The effectiveness of stunning techniques in ensuring that animals that are insensitive to pain.
- The use of electric prods

By measuring and monitoring these criteria over time, plants can determine when variations occur and can correct problems promptly.

As part of AMI's proactive efforts, the Institute in 1997 launched the Animal Care & Handling Conference, now an annual conference held in Kansas City. Typically 300 people attended the conference.

In 2002, the American Meat Institute Board of Directors took another proactive step by voting to make animal welfare a non-competitive issue among the Institute's members. Today, members share information that can enhance welfare and welcome each other into plants in an effort to share best practices.

In 2005, AMI merged the 1991 and 1997 documents in the comprehensive 2005 Animal Handling and Audit Guide. In 2010, a new transportation audit was added to the guide and in 2013, 2015, and 2017 the document was refined. The documents are posted for public viewing and downloading on www.animalhandling.org.

Economic Benefits of Humane Handling

In addition to a natural, human concern for animals, there are distinct economic benefits that result from humane handling.

When an animal is stressed due to heat, anxiety, rough treatment or environmental factors, the meat that comes from the animal will be of a lesser quality. For example, if an animal becomes agitated in the chute, stress hormones like adrenalin are released, and muscle pH drops. In cattle, this can result in "dark cutters," or dark spots, in meat. In hogs, this can cause Pale Soft Exudative (PSE) tissue, which appears as pale,

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soft spots in pork. These quality defects must be trimmed away and cause direct economic losses to meat companies.

Numerous studies have been done that detail the financial losses that can be attributed to these stress-related quality defects.

Also, in order to maintain optimal efficiency, meat plants depend on a continuous supply of livestock moving through the plants. Animals that are calm and well-handled typically will move through the chutes more easily, which enables the process to operate efficiently.

Data Reflect Improvement

Data collected by Grandin through surveys done annually since 1996 demonstrated consistent, sustained improvement in livestock handling and stunning. The data are available on www.grandin.com and are updated annually.

Results from a 2013 survey of members reflect a strong commitment to animal welfare and to voluntary efforts to go above and beyond regulations. All members who responded to the survey indicated that they conduct regular self-audits using the *Animal Care & Handling Guidelines and Audit Guide* authored by Temple Grandin, Ph.D. Some said they do full audits daily while others do them weekly. In addition, 83.3 percent of pork plants and 87.5 percent of beef plants do daily sensibility audits to ensure that stunning systems work effectively in making animals insensible to pain.

All responding turkey members indicate that they use the National Turkey Federation Animal Welfare Guidelines.

Other key findings include:

- 44.4 percent of pork plants and 47.1 percent of beef plants use some form of video auditing.
- 44.4 percent of pork plants and 43.8 percent of beef plants are audited annually by third party auditors while 38.9 percent of pork plants and 31.3 percent of beef plants are audited 2-3 times per year by third party auditors. 11.1 percent of pork plants and 18.8 percent of beef plants are audited 4-5 times per year. 5.6 percent of pork plants are audited 6-10 times per year by a third party. 6.3 percent of beef plants reported being audited more than ten times per year by a third party.
- 88.9 percent of pork plants, 87.5 percent of beef plants and 66.7 percent of turkey plants have used a third party expert to assess, design or modify animal handling areas during a renovation.
- 61 percent of pork plants, 43.8 percent of beef plants and 66.7 percent of turkey plants have used a third party expert to trouble shoot an animal welfare problem.

- When hiring personnel, plants require a combination of skills including experience with live animals (33 percent in pork plants and 27.3 percent in beef plants), education about live animal handling (60 percent in pork plants, 72.3 percent in beef plants, 66.7 percent in turkey plants), background checks (46.7 percent in pork plants, 63.6 percent in beef plants and 100 percent in turkey plants), and personality profiling (53 percent in pork plants, 45.5 percent in beef plants and 33.3 percent in turkey plants). All plants require animal handling training prior to working in areas where live animals are handled. In turkey plants, two thirds (66.7 percent) require education about live animal handling and all require background checks.
- In terms of training, 100 percent of pork plants use videos to train and one third of those use the Institute video. 93.8 percent of beef plants use videos to train and 42.9 percent use the Institute video. 66.7 percent of turkey plants use videos; all turkey plants use custom videos.
- 72 percent of pork plants and 58.8 percent of beef plants regularly send key personnel to the Animal Care and Handling Conference. One third of turkey plants reported sending personnel to the conference regularly.

The U.S. meat industry is committed to finding new ways to enhance animal handling and stunning in plants even further.

Conclusion

The U.S. meat packing industry will seek new ways to improve continually animal welfare in the meat industry by monitoring research, sharing best practices and embracing training programs. Optimal welfare clearly is good for livestock – and for business.

THIRD-PARTY EXPERTS

Kurt Vogel, Ph.D.

Associate Professor

Department of Animal and Food Science
University of Wisconsin River Falls

(715) 425-3704

kurt.vogel@uwrf.edu

Temple Grandin, Ph.D.

Professor

Department of Animal Sciences
Colorado State University

(970) 229-0703

<http://www.grandin.com>

Lily Edwards-Callaway, Ph.D.

Assistant Professor

Department of Animal Sciences
Colorado State University

(970) 491-5875

lily.edwards-callaway@colostate.edu