

For immediate release:

Creating a home on the road for livestock

New designs for livestock chutes and loading / unloading facilities are improving comfort and care during the transport process.

Calgary, AB, Feb. 17, 2009: Millions of livestock are transported on trucks everyday in North America. The job of everyone involved is to make sure those animals are moved safely, humanely and effectively.

That's a major task and responsibility. But there's good news from science – often the simplest adjustments can make the biggest improvement, say technical experts who spoke at the recent Livestock Transport Conference in Calgary, AB.

Themed “Are we there yet?” the conference brought together over 120 people including transporters, livestock producers, researchers and other industry leaders from across North America. The conference was hosted by Alberta Farm Animal Care (AFAC) and the National Farm Animal Care Council (NFACC).

One of the keys to finding simple and effective innovations is to have a common sense approach to thinking about ways to make the transport process easy on the animal, observed two speakers who presented new science. Dr. Nick Berry, Pork Production Associate with Cargill, discussed innovative thinking in pig loading systems, and Dr. Matt Ritter, Swine Technical Consultant with Elanco Animal Health, reported on opportunities in facility design for livestock loading and unloading.

Better loading chutes

A good example of thinking simple and common sense is putting yourself in the place of the animal, says Berry. When people travel on planes, they take for granted simple things that add to comfort such as airtight loading chutes to keep the elements out and an interior that where possible is designed to feel as inviting and familiar as a home environment.

“The obvious question is, why don't we do that for our pigs,” says Berry. “The answer is, we can.”

Berry presented results of a project that aimed to improve the design of loading chutes – the units similar to what people walk down before entering a plane, that in the case of livestock are used to move animals to or from ground level or a facility into a truck.

A key innovation used in the project was to incorporate a unique dock bumper system at each end of each extending portion of the chute, composed with a cover material that would expand up to 500 percent.

“This material is very similar to the coating around the unit that we walk down when we get on and off of an airplane. Often you see that same material used at commercial unloading facilities. As humans, we use it so we are comfortable or so that our computer or goods don't get wet or damaged. It only makes sense to do the same thing for our livestock and their caretakers.”

In the Cargill project, this relatively simple innovation did a great job of eliminating any environmental factors such as air or light that would distract, annoy or impede the movement of pigs.

Innovative flooring and sidewalls

Also in the project, the flooring of the chute and related animal movement areas, was coated with a specific epoxy material with diamond grit texture, and an inverted stair step design with customized tread size and spacing. This was all designed specifically for good pig footing.

The chute also incorporated a separate human return walkway, to allow for continuous animal flow through the unit, unimpeded by movement of the caretakers.

The texture and coloring of the walls was also customized to be pig-friendly. “It was a spray in lining similar to what you can get for the back of your truck,” says Berry. “But lots of care was put into the specifics, so it would mimic the concrete feel of the home pen environment and did a good job of eliminating any potential for shadowing that could slow or distract the animals.”

This unit also featured what Berry described as first implementation of incandescent rope lighting in an animal movement system. “That also did a really good job of eliminating any extra shadowing or glaring that may impede animal movement,” he says.

Overall, improving comfort during the transport process means looking after not only the livestock but also the people involved, says Berry. “Let’s keep in mind the workers and do what’s best for them also.”

The more inclusive the viewpoint, the better, he says. “As an industry, we need to be proactive in taking a whole systems approach, which may include components of design as well as management.”

Calmer livestock, safer livestock

Similar innovations in facility design can also go a long way to help, says Elanco’s Matt Ritter. Traditionally, this area has received little focus as an opportunity to support transported livestock, but a recent study by Elanco in partnership with Iowa State University has produced encouraging results.

“Facility design is a factor that has important implications for preparing pigs for transport,” says Ritter. “It pre-conditions pigs for the loading and marketing process, affects how easily pigs are handled during movement from the home pen to the trailer, and all of this affects the potential for injuries and transport losses.”

In the Elanco-lead study, key components of facility design targeted were pen design and pre-sorting of pigs. Pens were designed to be larger and pre-sorting systems were implemented to result in little or no mixing of unfamiliar pigs.

This resulted in several advantages. Among these, pigs had more room to exercise during the grow-finish period; pre-sorting allowed pigs an opportunity to recover from the stress of being sorted from pen mates; and pre-sorting reduced distances moved from pen to truck.

Overall, utilizing large pens and the pre-sorting system prior to loading reduced physical signs of stress both at loading and unloading, says Ritter. Perhaps most encouraging, the innovations reduced total animal losses during transport by 66 percent compared to pigs from traditional pens.

Not captured in the study was the potential to use pre-sorting systems in a structure that could reduce the typical movement of livestock from pens to trucks by 50 feet or more, which in theory should produce additional benefits.

Good for pigs, good for bottom line

Pre-sorting systems also increase flexibility in pig feeding. In addition to supporting reduced injury during transport, this could generate savings in feed costs, says Ritter. “We could likely save five pounds of feed for every pig out the door. With the high feed costs we’ve faced as an industry over the last six to 12 months, that could translate into 50 to 75 cents U.S. per pig.

Design and management options that create wider aisles pig movement could also be added to this type of system, he says. “Pigs can be moved up and staged during the loading process with less handling, at a slow and calm pace with little animal stress.”

All the innovations can be great for the pigs and also good for the bottom line, he says. And overall the same principles that results in benefits for pigs can also benefit other livestock. “The idea is to do things that are better for the animals and also help you be more effective. The two go hand in hand.”

The Livestock Transport Conference, hosted by AFAC and NFACC was sponsored by National Cattle Feeders’ Association, Animal Transportation Association, Alberta Livestock Industry Development Fund and Agriculture and Agri-Food Canada’s Advancing Canadian Agriculture and Agri-Food Program. More information on the conference including additional articles on several of the speaker presentations, is available on the CLT Web site at www.livestocktransport.ca and through the AFAC Web site at www.afac.ab.ca.

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