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The new world of transport biosecurity

When Steve's Livestock Transport started in business back in 1987, biosecurity was an uncommon word and cleaning transportation equipment a pretty simple process.

Since then, the company has expanded to become the largest commercial livestock transportation fleet in North America with 130 tractors and 175 trailers transporting 150,000 head of pigs a week from bases in Manitoba and Alberta. And biosecurity and disease risk management in transportation have risen dramatically in importance.

Today the company has developed a multi-set protocols designed to "provide safe and humane transport of livestock in a bio-secure environment, resulting in highest profitability to the customer."

Rick Peters, vice president of operations for Steve's spoke to the 2016 Banff Pork Seminar and outlined an impressive 11 point checklist of actions their company has taken to be at the leading edge of this area. It's also a window into a new world of sophisticated livestock transport.

Strict driver protocols. Drivers are not allowed to live on the same premises where pigs are kept or work in any kind of hog facilities. No pets are allowed in trucks.

All new drivers take basic training and must pass a Trucker Quality Assurance test. They are paired with an experienced driver to learn loading and unloading processes, biosecurity protocols, how to enter and exit a truck, proper cleaning, clothing and boots.

Trailer design and manufacture. Extra welds and capping in every trailer help ensure that manure cannot contaminate crevices or open tube.

Yard biosecurity. Trailers with livestock are not allowed in wash bay locations and can never enter yards unless the bedding and manure have been completely removed.

Designated parking areas separate dirty and clean trailers. Drivers are trained on how to properly load bedding, avoiding ground contact at all times. Before driving out of the yard, they are required to do pre-trip inspections for a final assurance that trailers are leaving the yard clean.

On farm biosecurity. Once on site drivers make boarding changes to the outside of the trailer before dressing up to work inside the trailer. Drivers are trained never to go beyond the trailer when loading. Pigs that accidentally fall to the ground are never placed back into the trailer. Chaseboards are used inside the trailer to prevent pigs from running back into the barn. Lastly, a driver never enters the barn to do their paperwork, says Peters.

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And in the event that they mistakenly enter the wrong farmyard, drivers are required to immediately call dispatch.

Biosecurity during transport. Drivers are trained to be aware of other livestock trailers on the road, including at border crossings, truck stops and highway rest areas.

Wash bays. Stability in management and supervisory positions helps ensure proper training of new personnel as well as consistency in washes. Wash bay personnel cannot live on premises where pigs are kept. All new washers are trained. All wash suits and boots are thoroughly cleaned and disinfected after washing each trailer. The floors in the staff room as well as common areas are disinfected daily, tested and records kept.

Wash bays are one way drive-through to ensure traffic always flows from dirty-to-clean, says Peters. Facility design moves water and air from dirty-to-clean side both for staff comfort and biosecurity control.

Complete trailer wash SOP. Fresh water is used and the wash bay floor is rinsed and disinfected before pulling a trailer into the bay. A combination of power-washing and foaming detergent and disinfectant scrubs the trailer inside and out.

A standardized inspection is performed to examine all areas of the trailer and tools. Failed inspections require a re-wash and re-inspection, says Peters. And this procedure is documented including names of washers and inspectors. Additional spot checks round out the process.

Undercarriage wash. The wash process is very thorough for the inside and outside of the trailer, the underside proves much more difficult, says Peters. Steve's is testing what they believe to be the first undercarriage wash system for livestock trailers. Jets embedded into the floor and sides spray high-pressure water up into the trailer underside and sides.

Separation system. Wastewater and solids from the washing process are separated and stored until they can be loaded onto trucks and hauled to a safe collection site.

Drying bays. Trailers are dried with large aeration fans which blow heated, filtered air. This improves disinfectant effectiveness.

Baking bays. One of the most recent innovations are baking bays. After the first PEDv cases were discovered in the U.S. hog industry in early 2013, Steve's searched for a way to ensure that all diseases in trailers were, in fact, destroyed, says Peters "This led us to the concept of "baking" trailers as the final step in extensive sanitation protocol for transport to effectively kills such bio-hazards as viruses and bacteria. At customer request, washed trailers can be parked inside the baking bay which heats up to an ambient temperature of 71-77 C and is held at that temperature for a minimum of 10 minutes."