

Practical tips for beating the heat

While the calendar indicates that the better part of summer is behind us, thermometers in many parts of the country indicate there's no end in sight. As a result, the number of heat-related questions I receive from producers increases with the mercury. This special report provides some practical tips for avoiding heat stress during loading, transportation and unloading.

1. Avoid loading and transporting pigs during the heat of the day.
2. Withdraw feed from market-weight pigs 12 to 24 hours prior to loading, if possible. Two studies have suggested that withdrawing feed for 12 hours¹ or 24 hours² prior to loading may reduce transport losses.
3. Minimize use of electric prods during the loading process. It is well established that aggressive handling with electric prods increases the rate of non-ambulatory pigs.³ However, a recent study reported no differences in rectal temperature or blood acid-base balance for market-weight pigs moved at their own pace for 164 feet through a handling course with plastic livestock paddles or with two shocks from an electric prod.⁴

Therefore, the number of shocks that a pig receives from an electric prod during the loading process (from barn pen to trailer compartment) should not exceed two shocks per pig. To accomplish this, we recommend that only the person moving pigs out the doorway should have an electric prod. Everyone else in the loading crew should use plastic livestock paddles and sorting boards.

4. Move pigs in groups of 4 to 6 from the pen to the truck to reduce the frequency of wedging and jamming in the aisle. Research has shown that pigs jammed or wedged in the aisle during handling were more susceptible to becoming non-ambulatory.⁵ The frequency of pigs becoming jammed or wedged in the aisle during loading is likely to be dependent upon:
 - a. Aisle width
 - b. Number of pigs moved by one handler (group size)
 - c. Weight of the pigs

As a general rule of thumb, the handler needs to be able to reach the first pig. If this cannot be accomplished by moving groups of 4 to 6 pigs, then the handler should take smaller groups to the truck.

5. Spread an absorbent material (wood shavings, barn lime, rice hulls, feed, etc.) on wet and slick floors to prevent pigs from slipping and injuring themselves.
6. If pigs are showing physical signs of stress during loading (open-mouth breathing, skin discoloration, and/or muscle tremors), place them in a designated recovery pen and allow them to rest and recover for a minimum of 3 hours prior to loading. Recent research has demonstrated that the vast majority of fatigued pigs will recover within 2

to 3 hours if the stressors are removed.⁶

7. Consider the following transport floor space recommendations for minimizing transport losses at the plant:

Pig Weights	Transport Floor Space
250-275 lbs.	5.00 ft ² /pig
275-300 lbs.	5.25 ft ² /pig

These recommendations are based on a recent large-scale commercial study² that evaluated the effects of six different transport floor spaces (4.26 vs. 4.47 vs. 4.70 vs. 4.97 vs. 5.26 vs. 5.60 square feet/pig) on transport losses in market-weight pigs (n = 4,662 pigs).

8. Place large fans near one side of the trailer during loading to force air through the trailer to keep pigs cool while the trailer is not moving.
9. Equip trailers with an internal sprinkler system and have a hose near the trailer to shower pigs immediately prior to transport. Showering pigs inside the trailer for 5 minutes immediately after loading during hot weather can reduce the skin temperatures of the pigs by 10%.¹ Therefore, once a trailer deck has been loaded, shower the pigs just long enough to get the pigs and the absorbent material wet. Avoid showering pigs to the point that water is standing in the trailer, as this water will most likely run out of the trailer and onto the road once the trailer leaves the farm.
10. Once on the road, keep the truck moving and avoid unnecessary stops. This is extremely important because the temperature inside the trailer increases when the truck is not moving.¹
11. Avoid long waiting periods at the plant prior to unloading by doing your best to meet your scheduled dock time. A positive relationship has been reported between waiting time at the plant prior to unloading and total transport losses,⁷ and this suggests that transport losses increase as waiting time at the plant increases.
12. Prior to arrival at the plant, communicate with plant personnel on the anticipated wait time prior to unloading. Determine if your trailer will have immediate access to the outside fans. If you will not have immediate access to the fans, develop an alternative plan that may include keeping the truck moving until the plant is ready for your pigs.
13. Unload the trailer at a slow and calm pace by using sorting boards and plastic livestock paddles. Do not use electric prods during the unloading process.
14. Loading crews should take a 10-15 minute break between each load and should drink plenty of fluids to prevent heat exhaustion, fatigue, and dehydration.

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