

Driving down shrink Webinar FAQ's

1. How do you reconcile reduced curfew times with the supply chain obligation under the Heavy Vehicle National Law's primary duties to eliminate or so far as reasonably minimise the transport safety risk associated with effluent during road transport?

The transport hub encourages producers to plan the animal's journey and evaluate on a case-by-case basis the risk associated with a breach of the HVNL guidelines. Beef producers now have a means to value the lost body weight associated with an imposed feed and water deprivation period in the HVNL guidelines.

2. Auctions plus assessments generally use a flat 5% for curfewed weight, should this be different depending on the actual weight of the animal

3. Is there a formula (or rule of thumb) for the recovery time of shrink weight loss?

To the best of my knowledge there is no equation to predict recovery time from weight loss due to feed and water deprivation. As a general rule of thumb, for cattle to realign their body weight and dry matter intake after severe feed and water deprivation cattle can take between 4 and 14 days.

4. Has there been any work on the effect of a full stomach of water on "travel sickness" in cattle?
No.

5. Is the extra weight conserved (still found) after chilling and boning, i.e. when the carcass leaves a processing plant in boxes?

Studies on short duration lairage (6 hours v 22 hours) demonstrate increases in hot and cold standard carcass weight for short duration lairage of 6 hours compared to 22 hours. I don't know if the weight of the boxed meat cuts is increased because this was not measured in the studies.

6. Would it be beneficial to feed a high energy supplement like molasses in the paddock prior to transporting cattle? Will this help retain that energy and slow down the rise of pH?

There is no evidence that molasses supplementation decreases body weight loss or improves meat quality. The intent of preparing cattle for their journey by feeding hay in the yards is to keep the gastrointestinal tract full during the journey.

7. If mustering only takes around 2 hours, would you still recommend keeping them in the yards for 1-2 days before loading? This would be on a different diet also...

The answer to this question is,.....It depends on each individual case. As a general rule of thumb, if cattle have an abundance of good quality (10 MJ/Kg DM) feed on offer, then keeping the animals in their pasture and grazing is ideal. There is one study in the USA by Coffey et al. that demonstrates greater body weight retention in cattle after a 16 hour period of feed and water deprivation when cattle were allowed increased grazing time before the deprivation period.

8. As a producer we are only paid on the grading and weight after the cattle are processed at the feedlot or meatworks but we have no control over how long this takes or the conditions. any suggestions?

Answer. Producers have control over how they prepare cattle for their journey. Following the best practice guidelines for transport of cattle will help reduce body weight loss. [Best practice guidelines for transporting cattle | Meat & Livestock Australia](#). Producers should communicate with the buyer regarding receiving and weighing protocols especially if you are being paid on a landed body weight.

9. What effect does changing the makeup of the feed have on shrink? Protein, starch, etc

Unfortunately, nutrient specifications of a diet are rarely reported in studies regarding shrink/body weight loss of cattle. There is more work to be undertaken to confirm any effects of a particular nutrient. Keeping the gastrointestinal tract full for as long as possible before feed and water deprivation is the best practice recommendation.

[Best practice guidelines for transporting cattle | Meat & Livestock Australia](#)

10. The predictive equation example for a feeder steer job: 450kg steer 5hrs transport is 28.5kg BW loss and a 3% shrink is only 13.5 kg!

Answer, If the total time off feed and water was 5 hours then the amount of weight loss predicted by the equation for a 450 kg animal is 28.9095kg. 3% shrink on a 450 kg animal is 13.5 kg.

11. If your cattle are on fresh green feed (loose stool) is it still advisable not to withhold water before transport to avoid slipping when transported ?

In preparation for a journey the transport hub recommends feeding cattle on a 10MJ/KG DM hay at 2% of body weight for a minimum of 24 hours and preferably 48 hours. It is still recommended that the animals be given access to water during this time.

[Best practice guidelines for transporting cattle | Meat & Livestock Australia](#)

12. Any comment on popular marketed electrolytes and supplements and their efficacy on retaining hydration/ reducing shrink?

In 2011, MLA contracted a review of electrolyte solutions and other compounds on shrink/live weight loss in cattle. The review can be accessed here, [b.nbp.0703_final_report.pdf](#). The authors of the review found, “Studies often lacked appropriate study designs and were not suitable for meta-analysis. Liveweight change in cattle was the only variable consistently compared across studies. Only 17% of trials and comparisons showed a significant positive effect of electrolytes on the liveweight of cattle during transport. Most trials and comparisons (83%) found no significant differences in liveweight between groups.”

13. Is having salt available prior to transport a good idea?

There is no evidence that salt (NaCl) supplementation decreases body weight loss during transport. In some circumstances, such as cattle grazing on basalt country sodium may be limiting in the diet and giving access to sodium can assist in improving dry matter intakes prior to transport. In addition, hay grown on basalt country may be poor in sodium and supplementation with salt (NaCl) in the yards can improve intake.

14. Does shrink affect meat colour?

Yes. Shrink can affect meat colour indirectly, particularly when shrink is caused by prolonged transport, feed and water deprivation, or other stressors before slaughter.

Shrink refers to liveweight loss, usually as a percentage of initial body weight, before sale or slaughter, mostly from loss of gut fill, water, and body reserves.

When shrink becomes significant, cattle can experience energy depletion and stress, which reduces muscle glycogen stores. Depleted muscle glycogen at slaughter means less lactic acid is produced during post-mortem glycolysis, resulting in a higher ultimate pH in the meat. High-pH beef is associated with dark cutting (DFD – Dark, Firm, Dry), where the lean appears darker red to purplish rather than the normal bright cherry-red colour. The conditions that often accompany excessive shrink—such as long transport times, fasting, dehydration, mixing unfamiliar cattle, harsh weather, and handling stress—can increase the risk of dark cutting.

For grass-fed cattle, especially in northern Australian systems, the risk increases when cattle:

Are held off feed for extended periods.

Travel long distances.

Experience multiple handling events.

Enter slaughter with already low energy reserves.

Bottom line: Moderate shrink from normal transport is unlikely to noticeably affect meat colour, but severe shrink associated with stress and glycogen depletion can increase the incidence of dark-cutting beef and darker lean colour.