# Improving welfare of horses in transit

## by Elvira Currie

*'Regular trips around the globe and a variety of champion companions provided, top quality food, valet service and five star accommodation upon arrival.'*

Sounds like an advert for a business executive rather than a thoroughbred stallion. At the other extreme, an advert might read more like

*'Backpack holiday, final destination the Bangkok Hilton'*

or

*'Travel cattle class, your final destination is the nearest abattoir'.*

Whether transporting a million dollar stallion from one side of the world to the other to increase his breeding season, moving horses across country to compete or to the abattoir, horses can be restrained for extended periods.

The research reviewed investigated methods for improving the welfare of horses in transit. Reducing stress and improving the condition of the animal upon arrival. Reports studied preferred orientation, stocking density and its impact on the ability of animals to balance and respiratory health. The goal is to achieve minimal impact of travel, reducing the number and severity of injuries sustained before slaughter and minimising recovery time of performance horses prior to resuming training or stud duties.

The orientation (Gibbs and Friend, 1999) and density trials (Collins et al., 1999) were conducted using a single deck, commercial trailer with several compartments; the animals were either tied or loose in the compartments. Single deck trucks where animals are transported in pens are commonly used for transporting meat horses. Competition horses are more likely to be transported in single horse stalls which are orientated either parallel and facing the direction of travel, perpendicular to the direction of travel or angled.

Gibbs and Friend (1999) found that the preference of orientation when free standing was to be angled to the direction of travel, no preference was shown for angling to be neither forward nor backward travel. Horses rarely stand sideways to the direction of travel, but occasionally stood either facing or backward parallel to the direction of movement. Ability to balance was not affected by orientation in the trial conducted (Gibbs and Friend, 1999). These orientations were similar between horses whether tied up or free.

Head position is restricted as a side effect of controlling the horse in the stall, however even when not restrained horses carry their heads unnaturally high position when travelling forwards (Cregier 1982). Lower head carriage allows weight to be shifted forward and enables better balancing ability (Gibbs and Friend, 1999). Gibbs and Friend (1999) observed that horses do spend some time facing forward. They conclude that if horses were averse to facing forward, then they would avoid this orientation. The horses used in the experiment had all been transported prior to the trial and possibly chose this orientation due to habit or familiarity.

Transport is considered to be the greatest predisposing factor contributing to severe lower respiratory tract infection in horses (Racklyeft, Raidal and Love, 2000). Severe contamination of the lower respiratory system can occur after 6 hours with the head restrained in an elevated position (Raidal et al, 1999). By extending the time of restraint increases the risk of respiratory infection (Racklyeft, Raidal and Love, 2000). Strenuous exercise following transport increases the risk of respiratory infection (Racklyeft, Raidal and Love, 2000).

The respiratory system is compromised by dehydration and air pollutants; transport increases the exposure to both these factors. Water loss from the respiratory tract will impair cilia function. Cilia filters inspired air, then clears inspired particles from the respiratory tract. Increased concentration of airborne pollutants immediately prior to, during or following travel will further increase the risk of disease (Raidal et al, 1999). Though pollutants may not directly cause disease, they impede the clearance of material from the lung by clogging cilia and compromising macrophage function. Transport increases heart rate and the release of cortisol, both of these responses are indicative of stress (Raidal et al, 1999). High levels of cotisol will further reduce immunity.

Transporting horses in pens at high density affects the stance of the animals. High density (1.28m2/horse) meant that the horses had abnormal head carriage, either very high positioned over the backs of other animals or held low at leg level (Collins et al., 1999). Horses transported at higher densities, even when they are not restrained are unable to adopt a relaxed and balanced stance if they lack space.

Horses transported at high density were unable to submit to more dominant animals and where more likely to be injured or fall (Collins et al., 1999). Injuries were caused by other horses passively by standing on their legs while adjusting position and by aggressive acts such as biting or kicking. Grandin, Mcgee and Lanier (1999) recommend that aggressive horses be segregated. This policy will reduce injuries and stress, the submissive horses are no longer pressured and the dominant horses are not frustrated by others infringing on their space.

Experienced equine travellers prefer to maintain their balance independent of other horses and surfaces (Gibbs and Friend, 1999). When enough room is provided such as in the low density treatment (2.23 m2/horse (Collins et al., 1999)), horses balanced with fewer foot movements (Gibbs and Friend, 1999). The muscular activity produces muscle enzymes, enzyme levels were shown to increase within 6 -12 hours of transport. Stress of travel and inadequate feed intake alters the animal's ability to metabolise these enzymes, this increases the potential for muscle damage (Raidal et al, 1999).

Wet floors reduce traction and increase the risk of injury to horses (Collins et al., 1999). The comparison between shod and unshod horses showed little difference in regard to the orientation, but unshod animals move their front legs more frequently (Gibbs and Friend, 1999).

Trials by Gibbs and Friend, and Collins et al. were conducted using one transport and only a limited number of horses, whose travelling history was unknown. The research was limited by the fact only one transport was used, but lower stocking density and preference for angled orientation worthy of consideration when considering welfare of horses in transit. The research regarding reducing the risks of pleuropneumonia has been done over 20 years and many hundreds of horses and situations, the recommendations have been proven to be effective and are worthy of implementation.

Recommendations for stall dimensions and orientation need to be developed and implemented. A method of restraining horses during transport which does not require head restrain, allowing horses to lower their heads safely and eat with their heads down. Trip time for horses being trucked is set out in welfare guidelines, these however do not match the time frames recommended in studies surveyed.

The information is available but economics of increased floor space allowance and reduced travel time are not in favour of transport companies and hence implementation of recommendations will be slow.

## References

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