

Technology Campus Geel

Horse collection centre + - slaughterhouses

Argentinian site visit report



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February 2016

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Foreword

The report that follows consists of a number of site visit reports in Argentinian horse round-up sites and slaughterhouses, a visit to the biggest livestock market and a discussion with the local authorities (SENASA). It is a reflection of findings at the time of the company visits. This report is not the result of a long-term follow-up study but is rather an outcome of a critical and thorough analysis of all aspects regarding animal welfare during the extensive site visits. The specifically applied method was designed to prevent “possible set dressing” and, on the basis of random samples, a scientifically tested picture could be obtained of the status of welfare of the animals at the visited locations during the journey through Argentina. During these extensive site visits environmental parameters were recorded, animal observations were conducted and the responsible slaughterhouse personnel and floor workers were interviewed. These findings at the time of the site visit were tested against the European standards, norms, etc., for animal welfare.

The site visit was executed by Bert Driessens and Jos Van Thielen, both lecturers at the KU Leuven Technology Campus Geel, but also researchers in the research group Dier&Welzijn with many years of expertise in the monitoring of animal transports and animals in slaughterhouses. The research was conducted and the advice formulated in complete objectivity and independence.

Programme

Monday 2 November 2015

(morning)

Visit to horse slaughterhouse Equino Entre Ríos (Calle Pública S/n, Gualeguay / Feersa, Entre Ríos Province, Argentina)

(afternoon)

Visit to horse collection centre/horse collection farm Equisur Agropecuaria S.R.L., Gualeguaychu, Entre Ríos Province in Entre Ríos

Tuesday 3 November 2015

Visit to slaughterhouse Lamar (RUTA 5 (Km 94.5), 6600 Mercedes, Buenos Aires Province; about 120 km from Buenos Aires)

Wednesday 4 November 2015

Visit to the biggest cattle market in Buenos Aires

Meeting with Vice-President of SENASA Dr. Luis Carne and staff
National Service of Agri-Food Health and Quality (SENASA)
Address: Av. Paseo Colón 367 - C.A.B.A. (C.P.: C1063ACD). República Argentina

Thursday 5 November 2015

Move to Rio IV (Cordoba Province) (about 700 km from Buenos Aires).

Friday 6 November 2015

Visit to horse slaughterhouse Pico

Introduction

Behaviour and senses

The behaviour of a horse can only be understood and explained once it is known how the animal experiences its environment. This experience of the environment is dependent on the quality and specific characteristics of the senses. Like humans, horses have five senses: sight, hearing, smell, touch and taste. However, these senses differ from those of humans, so horses will experience their environment differently from humans. Horses have a different 'Umwelt'. This term describes the specific manner in which a species perceives and experiences. Each organism inhabits a different 'Umwelt'. In order to understand the advice, comments and recommendations based on these observations, we have made a list of essential background information on horses' senses. This should enable a better understanding of the comments and recommendations.

In order to understand the advice, comments and recommendations based on these observations, we have made a list of essential background information on horses' senses. This should enable a better understanding of the comments and recommendations.

- The horse does not have the ability to see details but does have excellent night vision;
- The horse is very sensitive to light. Its relatively big eyes allow in a large amount of light. This means that the horse has some difficulty adjusting to sudden differences in light.
- The horse will be temporarily blind(ed) if it moves too quickly from light into dark or vice versa.
- The horse has a very wide field of peripheral vision, with a blind spot in front of the nose and behind the body.

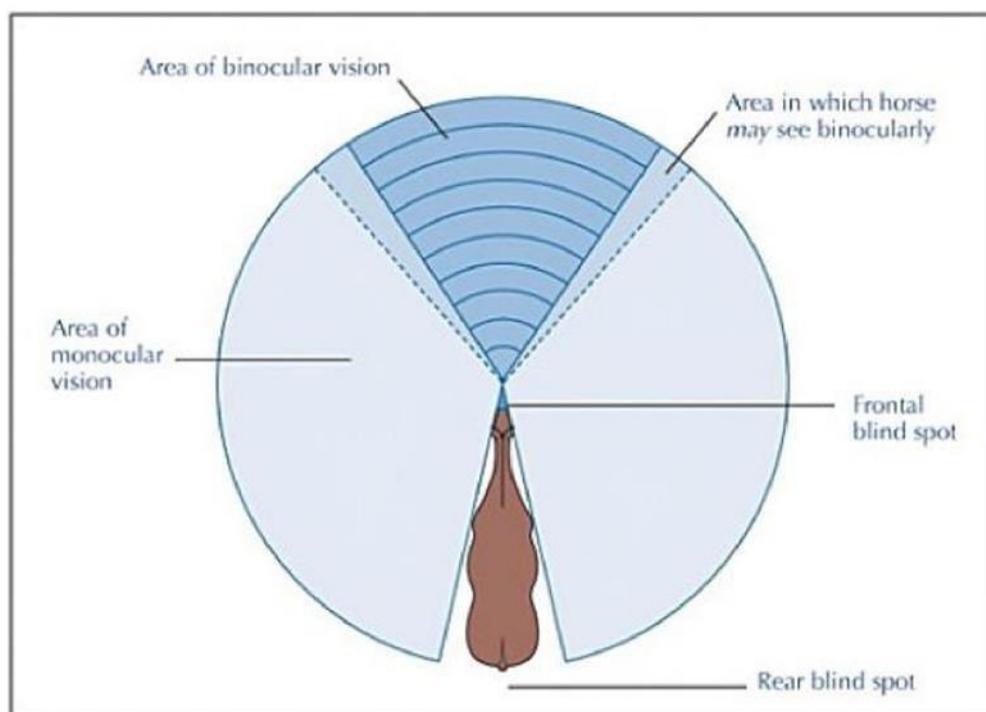


Figure 1: Fields of vision of a horse (McBane, 2012)

- The horse has a limited perception of depth, so it is difficult for a horse to see the difference, for example, between a puddle and a deep well.
- The horse has dichromatic vision, whereby it can only see two wavelengths. This means that the horse can only see a limited range of colours.

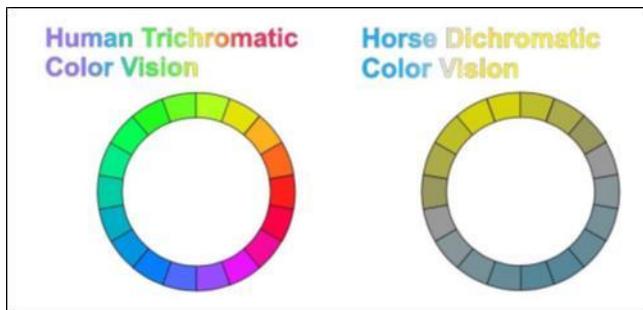


Figure 2: Comparison of the colour vision of human and horse (Carroll et al., 2001)

- The horse has a sensitive layer on the retina, the so-called 'tapenum lucidum'. This means sudden changes in colour or ground texture may make the horse nervous or induce a panic reaction.
- Horses are least comfortable with the colours black, white, blue or yellow. With these colours the animals move only reluctantly or stop moving altogether.
- Floors and walls coloured in grey, brown or green cause, on the other hand, few problems.
- The horse's hearing is much better developed than that of humans (human: from 20 Hz to 22 kHz ⇔ horse: 55 Hz to 33.5 kHz).
- Horses display a stronger reaction to noise with a higher frequency.

Transport

The various aspects of transport, such as loading, unloading, being taken out of a familiar environment, enclosure, vibrations and temperature differences may cause stress in horses. This stress results in physiological changes (e.g., increased cortisol concentration in the blood, racing heart rate, etc.) and behavioural changes.

The amount of stress that a horse experiences during transport will depend on the duration of the journey, the method of transport, the positioning of the horse and the skill of the driver. Training, age, sex, race and environmental circumstances will also determine the reactions of a horse during transport.

Loading is regarded as one of the most stressful moments of the transport. Horses are often afraid to enter an enclosed dark trailer. A horse's eye adapts only slowly to sudden differences in light. Before the eye has adapted the horse will find it very difficult to assess what is happening. Horses also avoid confined spaces by instinct because they are then unable to flee from possible danger. Problems during loading not only make the process more difficult but may also endanger the safety of the horse and rider/driver. The loading process should proceed more smoothly as the size of the trailer increases. The trailer could also be made to look less frightening by leaving the top half open or by hanging lights inside. Openings in the trailer give the horse the opportunity to view the environment around the trailer.

Horses are very sensitive to visual stimuli coming from ground level. The colour of the ground may influence the behaviour of the animals. Horses seem to be most uneasy around black, white, blues and yellows. The animals hesitate or stop before they cross ground or floors in these colours. Some horses simply cannot be persuaded to cross them at all. Grey, brown and green ground mats cause few problems. These are very common ground or floor colours, which may explain why there was so little reaction. Red is not a standard floor colour, yet the horses did not display any negative reactions to that colour. Horses do not experience the colour red as intensely as humans.

A horse is a herd animal. Separation from its kind (e.g., during transport) may lead to a number of psychological (e.g., sweating) and behavioural changes (e.g., stamping, vocalizations, etc.). It is therefore recommended to transport horses in groups. If that is not possible, a mirror may be hung in the trailer so that it looks as if there is another animal in the trailer. The presence of one of the same kind, both in the flesh and in mirror image, reduces the incidence of stereotypical behaviour during transport.

During transport a horse is exposed to forces resulting from acceleration, the taking of corners and braking. Horses distribute 60% of their body weight over their forelegs. The hind legs are not as well adapted to constant redistribution of body weight. During transport horses will spread their forelegs and hind legs, stretching their foreleg slightly forwards in order to maintain their equilibrium. This position (usually) prevents the horse from falling over during the drive but it is tiring for the animal.

The orientation of a horse inside the trailer or truck also has an influence on the balance and posture of the animal. Horses with their heads facing in the direction of travel will lose their balance sooner because the greater part of their body weight rests on their hind legs. As mentioned earlier, the hind legs are not particularly well adapted for this purpose. In the forward-facing position many horses will hold the head abnormally high out of fear of banging the head or neck against the side of the trailer. If a horse is placed in the trailer with its hindquarters towards the direction of travel, any bump against the front wall can be absorbed by the animal's rump. The risk of injury to the head and neck are then much smaller. The horses will also be less startled by passing vehicles because they can see them coming from a distance.

Handling horses at the slaughterhouse

The procedures before slaughter cause fear and stress among horses. The animals are possibly separated from familiar members of their group and are kept in unknown surroundings with unknown animals and strange smells, images and sounds. The animals will also be hungry and thirsty after a long drive. With all these sounds, images and – above all – smells in the slaughterhouse, the horses know that danger threatens and they will become restless. The heart rate accelerates, the concentration of stress hormones in the blood increases, and behavioural changes manifest.

Most horses are usually already nervous in the waiting area. They run around bewildered with pricked-up ears, waving their tails, snorting and whinnying. The horses also display muscular stiffness and tremors, repeatedly shifting their weight from one leg to the other. It is logical that the horses will not enter the stunning area without a fight. On their way to the stunning box the horses' stress factor is often much higher. The animals will protest, stamp, leap up and/or box with each other. Horses are stunned using a captive-bolt pistol. The device is held against the animal's forehead so that the bolt can penetrate the skull and brain. The horses are killed immediately and breathing stops. Most animals continue kicking their legs immediately after being killed.

Besides being an animal welfare problem, reduced welfare for these animals during transport and in the slaughterhouse also represents economic losses through inferior meat quality and possible death. The carcass and meat quality deteriorates as a result of bruising and high levels of stress hormone. To prevent these problems the level of stress during transport and in the slaughterhouse must be kept as low as possible. Rubbing a horse's nostrils with menthol-scented ointment helps to make the animal easier to handle. The horse can no longer distinguish between the smell of fear and stress from the slaughterhouse and the menthol and therefore calms down. Other ways of reducing stress levels include the setting up of visual barriers, the removal of loose-hanging chains that may clink and rattle, and darkening the entrance to the stunning areas.

Visual barriers such as metal partition walls or curtains stop the horse seeing the movement of persons and equipment. Darkening the entrance, combined with local administration of the menthol salve, should facilitate entrance to the stunning area.

Summary and conclusion

During the first week of November 2015 two researchers from the KU Leuven research group Dier&Welzijn visited a number of horse slaughterhouses, horse collection centres and a livestock market in Argentina. Both researchers are experts in animal welfare and farming matters, during transport and the stay in the slaughterhouse.

The various site visits involved a number of tests on the basis of random sampling. All aspects of animal welfare and the treatment of animals were tested against scientifically accepted standards and against European directives.

Each visit involved extensive discussion with the persons in effective charge of the slaughterhouse and the managerial and executive personnel giving instructions to the jointers and boners, etc., and the responsible AWO (animal welfare officer). Various supporting documents and pieces of evidence were requested (for example, regarding the keeping of statistics on the correct administration of stunning), and also certificates attesting to the proficiency of the personnel.

There was also a systematic check (based on the Five Freedoms) of the existing infrastructure in animal welfare matters. The arrangements for releasing the animals and driving them into temporary waiting corrals and the provisions for the organization of the stunning facilities in these areas were systematically inspected. The existing infrastructure was subjected to rigorous visual inspection so as to yield answers to numerous questions. Are all necessary infrastructural facilities in place to ensure respect for the well-being of the animals present? Were any incidents recorded such as, for example, sharp projections against which the animals may injure themselves? Were there any obstacles that did actually cause or may reasonably be expected to be capable of causing a shock reaction in the horses in transit? Are there any tight corners or poorly lit places in the drive corridor? Is there any way that the waiting horses can protect themselves from possible heatstroke? Are the waiting pens equipped with systems for the supply of food and water?...

Assessment was also made of the professional skills of the slaughterhouse staff coming into direct contact with / having to deal hands-on with livestock on the hoof. Each visit involved a systematic investigation as to whether and the extent to which the jointers and boners received any basic training in the handling of live animals and in matters of animal welfare. Investigation extended to the presence of any so-called "animal welfare officer". Over and above all the foregoing, the floor workers were also placed under extended observation to assess their skills and proficiency in their handling of horses (under circumstances not natural for these animals) and to come up with answers to the following questions. Was the personnel sufficiently skilled and qualified to process the horses in a painless manner? Was the personnel able or even flexible enough to assess problem situations and to reach a satisfactory resolution?

Objectively quantifiable parameters of any relevance to animal welfare (such as light intensity, temperature, air speed, background and ambient noise, disturbing shafts of light and dark patches) were also systematically recorded at various points.

This specific *modus operandi* of data collection / observation on the killing floor enabled the research team to form an objective idea of the situation regarding animal welfare in the visited slaughterhouses and processing sites. It also yielded the following results.

A first observation was that the managerial and executive staff and the employees and workers of every visited site offered their spontaneous and unstinting cooperation and gave free access to all of the processing areas. They also accepted whenever the KU Leuven team requested for animals to be moved, stunned or killed in order to be able to form an accurate idea of the expertise and infrastructure in place. The team was indeed impressed by the calm, matter-of-fact proficiency which the gauchos processed the horses.

A second observation was that the government, notably SENASA, was present at every turn. The slaughterhouses and the livestock shipments were all checked and certificated by SENASA. Talks in Buenos Aires with the leaders of SENASA would appear to suggest that animal welfare is now also a major issue for the Argentinian government.

A third observation (noted on a number of site visits, and mainly in the livestock market but also during the slaughterhouse inspections) is that Argentina is an extensive agricultural territory in which the actors (cattle-breeders and farm hands working with livestock) trade in bovine and equine meat and edible meat offal and derived meat, skin, hide or bone products in an efficient, demand-driven way of doing business. We also noted very extensive keeping of stocks of horses for such purposes.

During inspections at the livestock market, in the slaughterhouses, at the horse collection centres and in transit (in truck shipments) we noted that the trailers for animal transport were compartmentalized and fitted with anti-slip floors. Our interviews with the livestock market staff and workers would indicate that the personnel on the market (with incognito visiting) and at the collection centres is by all means cool and calm but, by the same token, very perfunctory in its handling of the livestock.

The inspections of the slaughterhouses revealed no signs of unacceptable cruelty or disrespect of animal welfare that might be levelled against the slaughterhouses. The KU Leuven team established that the companies had made arrangement for regular training courses for their personnel and were also able to record as much in detail. Documents were regularly completed for self-assessment and then returned or, as the case may be, not returned. In every slaughterhouse there was at least one person placed in charge of animal welfare by the slaughterhouse manager. In addition the management and workers in each of the visited slaughterhouses was also given a basic training in animal welfare and the handling of horses. That having been said, this document produced by the KU Leuven team also sets out a number of areas of concern that might improve the speed and ease of proceedings (e.g., livestock drives). The slaughterhouse management will gladly accept any advice as regards areas for improvement.

In order to substantiate such a study in a more scientific way, in order to make such an assessment more convincing – but also within the scope of self-assessment – it is recommended to step up the monitoring of slaughterhouses. It is for this very reason that we aim to conduct a follow-up / monitoring in the two slaughterhouses, say, four times per week (spread over the year) so as to allow for seasonal and / or climate influences. That way we could develop welfare indices, objective correlations may be made with meat quality indices and measures may then be taken and validated (that might have a positive impact on animal welfare and meat quality). In addition to slaughterhouse monitoring, horse transports would then also be followed to keep track of impacts such as air speed, solar radiation, and the like. In-house research in Belgium would suggest that transport practices to date have already made a significant impression on the behaviour of animals in slaughterhouses and on the quality of the meat that eventually finds its way to consumers' dinner tables. Such research can also finally sweep aside the criticism that the monitoring of animal welfare will never amount to anything more than well-meaning words on paper.



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