Large Animal Behaviour

Case study wrap-up

Q1. Fence injuries are very common in horses. What innate behaviour contributes to this type of injury?

- Horses are prey animals. If for some reason a leg gets caught in a fence (for example kicking at a horse on the other side of the fence) they will fight very hard to free themselves, as if they are caught by a predator.

Q2. What are some of the reasons he may have trouble catching the horse and what could be the consequence if he keeps trying?

- The horse may feel threatened by someone approaching directly. He is injured so may feel more vulnerable. The first response to a threat is to move away. If he successfully avoids the threat by moving away, he is more likely to use this response, making him harder to catch in future.
- By running away, he may make the leg injury worse.
- A young horse usually has less training, so is likely to be more difficult to catch and halter.

Q3. What problem may he encounter doing this? (using a bucket of feed)

- All horses will come and start competing for the food.
- A young injured horse is likely to be lower in the hierarchy, so he is unlikely to get near the food.

Q4. Why would this method be more successful?

- She uses a less direct approach, which is less threatening.
- First touch then release, incremental steps until she can lead the horse.
- Horse is rewarded for appropriate behaviour and relaxes.

Q5. What body language can you see in the horse below and what emotions do you think the horse is experiencing?

- Raised head, stiff neck, wide open eye (white of eye), flared nostrils, tense mouth.
- The horse is fearful and very alert, ready for flight.

Q6. Why is this situation dangerous and who is in danger?

- The horse as well the people around the horse may be at risk.
- The horse may try to escape and fight the restrained (halter and lead rope).
- If he panics, he can run over people or kick out.
- If he manages to escape, he will run around with the lead rope dragging behind him.

Q7. What might be a better strategy for where to examine the horse?

- Close to the paddock where he is near other horses.
- Since a horse is a herd-animal they feel more secure near other horses.
- Some horses suffer from separation anxiety

Q8. What body language do you see and what emotions do you think the horse might be experiencing?

- Head and neck relaxed, relaxed eye, attention on the handler –
- Calm, less anxious

Q9. What is a nose twitch, and how do they work? What other type of twitch could you use ?

- Nose twitches apply pressure to the horse's upper lip and stimulate the nerves to cause endorphin release.
- The horse appears to enter a trance-like state and stands still in most cases.
- Traditional twitches consist of a handle (preferably plastic rather than wood), typically with a soft rope loop on the end.
- Alternatives can be skin twitches, while ear twitches are considered cruel.

Q10. What are some of the problems with stable confinement and how can they be minimised?

- Horses don’t like to be isolated. Keep another horse in the next stable or keep with a familiar horse in a small yard, when this is possible with the injury.
- Provide low quality hay *ad lib* in slow-feeder hay-nets
- Confinement in stables can lead to stereotypies as horses are highly motivated to eat all day and walk long distances.

Q11. Why did the sheep all run away together and why would he not have seen a lame sheep?

- Herd movement due to fear – sheep will often move away from an approaching human.
- Sheep often hide injuries as they are a prey species.

Q12. Explain how a sheep may end up on its back and what the consequences can be if not assisted to get up.

- Sheep find it very hard to get up when lying on its back.
- They generally only end up there if they lose their balance, either because they are heavily pregnant or in full fleece.
- If left gas fermentation in the intestines can pressure the lungs and the animal may be unable to breath and die.

Q13. Would you follow the owner's instructions? Why or why not?

- No, horse may be fearful with unfamiliar people and especially with a painful eye.
- Tying to a fence is not adequate restraint to work safely.
- If the horse tries to escape, he may panic and get injured.

Q14. What method do you suggest?

- Incremental pressure- release or positive reinforcement – similar to video provided with lecture.
- Releasing technique and moving a little further each time.

Q15. What could be the problem with this approach? What would you suggest to him?

- Bring the whole mob in, hard to separate one animal in the paddock.
- When moving a mob of sheep, it is important to stay behind the driving line and just within the flight zone. This may be hard to do for one person, particularly since the sheep may not be used to the new holding yard.
- Once the whole mob is in the yard he could draft of the lame animal and a few extra to keep it company and let the rest go back to the paddock.
- For ease of handling in the future it is a good idea to get them used to providing food as a stimulus in the holding area.

Q16. How would you handle this sheep and examine its feet?

- Confine in a corner against the fence, lift the chin, unbalance the sheep and tip on its hind quarters.

- https://www.youtube.com/watch?v=wgM9cuKM-54

Q17. What do you advise the owner how to house this animal in a stable?

- Put more than one sheep in the stable – at least two.
- Provide soft bedding and ad lib supply of hay and fresh drinking water.

Additional questions

1a. Stereotypies are common in many animal species. What is the definition of stereotypic behaviour? Give 3 examples of stereotypic behaviour in horses.

- A repetitive, fixed behaviour pattern that has no obvious function.

- Crib biting
- Wind sucking
- Weaving
- Box/fence walking
- Wood chewing

1b. Why might they develop and persist? Once established should they be prevented from being expressed?

- Unfulfilled motivation for grazing and locomotion. Horses naturally spend a large part of the day grazing and walking. They may develop as early as during weaning and may persist throughout life.
- Stereotypic behaviour releases endorphins that help an animal cope with stress. This becomes like an addiction that may persist even when the living circumstances change.
- When trying to prevent these behaviours you take away the coping mechanism of the horse, resulting in greater stress.

1c. In cats, overgrooming can be a stereotypical behaviour. What are the similarities or differences from stereotypies in horses?

- During a social conflict, for example, a harassed cat may be undecided about whether to run from its attacker or to stand and fight. Instead, the cat displays a third, unrelated behavior, such as grooming. This is a normal activity that cats find calming and reassuring. If the displacement behavior becomes a habit and is generalized to any stressful situation, it becomes a stereotypy–a prolonged or repetitive behavior that serves no apparent useful purpose and, in some cases, is actually self-destructive.

- Stereotypies are sometimes compared to obsessive-compulsive disorders in humans. Thought that endorphins are important in cats as well.

- The cure for this behavior is to determine the source of the stress and to remove it, if possible. In multi-cat households, the interactions between cats can be a source of stress, so look for aggressive behavior between the cats and note how the overgrooming cat is reacting to the others.

2A. Discuss how the type of species affects behaviour when faced with novel or fear-provoking situations.

- Prey animals have a very strong flight response. Trying to run away is their first response. They only show defensive aggression to get away. Predators are more likely to show aggression when fearful. Although cats are predators, they are often fearful and may try to hide.

2B. Discuss how domestication may have affected behaviour in different species. What are the strongest drivers for selection in the different species?

- Dogs and cats have been selected as companion animals and generally like to interact with people. Horses, cattle and sheep have been selected to be docile, but not necessarily to interact with people to form a bond.
- Dogs in particular have been selected to live compatible with humans and also live in large social groups so have been selected for behaviours such as appeasement. Drivers for selection are more for about production and performance.

2c. Discuss the different experiences these species may have had with humans and how this may affect their responses to humans when faced with novel or fear-provoking situations. Think particularly about the early experiences with humans

- Dogs and cats are socialised to people from a young age and most interactions with people are positive.
- Horses are often handled only to be wormed and trimmed until they are broken in. These interactions are somewhat negative. Breaking in also involves negative interactions although there are also positive interactions. Similarly riding involves a mix of positive and negative interactions.
- Sheep and cattle have often limited interactions with people, and these are largely negative (castration, tail docking, worming etc).

3. What impact do you think handling might have on production in livestock species? (you might need to do some research. Dr Paul Hemsworth has done a lot of work in this area)

Negative handling, fear of humans, stress and pig productivity

Experiment	Fear of humans	Cortisol	Productivity
Hemsworth et al. (1981)	⇑	⇑	⇓ Growth rate
Gonyou et al. (1986)	⇑	⇑	⇓ Growth rate
Hemsworth et al. (1986)	⇑	⇑	⇓ Pregnancy rate
Hemsworth et al. (1987)	⇑	⇑	⇓ Growth rate
Hemsworth & Barnett (1991)	⇑	-	⇓ Growth rate
Hemsworth et al. (1996)	⇑	⇑	⇓ Growth rate