Large Animal Behaviour

The intended learning outcomes (ILOs) of this module are:

Being able to

- Describe the principles of normal behaviour in large animal species including cattle, sheep and horses
- Apply an understanding of the normal behaviour of large animal species in order to interpret their interactions with humans
- Describe the behavioural husbandry requirements for large animal species and explain environmental influences on their behaviour

Video 1: Introduction

For the purpose of this module large animals include cattle, sheep and horses. While they show species specific behaviour, they have a few things in common. They spend most of the day grazing, they live in herds and they are prey animals. These characteristics have a large influence on their behaviour. Understanding how this influences their behaviour will help us manage and interact with these species.

Video 2: Cattle

When cattle were first domesticated, we see the existence of two distinct sub-species, zebu cattle (Bos indicus) and European cattle (Bos taurus). Zebu cattle are well adapted to tropical environments and heat, with a fatty hump on the shoulders, a large dewlap and drooping ears. Most Bos indicus cattle in the north of Australia are crossbreds with Bos taurus, however their temperament is distinctly different from the traditional beef breeds (Bos taurus) of the south. They tend to be more aggressive and generally have little contact with humans. Dairy breeds are more docile and dairy cows generally have had a lot of human contact from an early age, making them much easier to handle. Both genetics and experience affect how they respond to human interaction.

The herd is very important to cattle, as it provides for safety, and they become fearful when separated from the herd. A herd naturally consist of females and their offspring, while adult males live in bachelor groups. Members of the group are part of a strong social structure, which limits the need for aggression.

Cattle spend most of their time either grazing or resting and ruminating. Ruminating is reduced when cows are sick or stressed, so this is a good indicator of their welfare.

They have a wide field of vision and are sensitive to contrast and motion. They can rotate their ears to focus on the direction of certain noises, which is a good indicator of where their attention may be. They use mainly body language to communicate with each other, and facial expressions are important indicators of their emotional state.

In stable herds we see little overt aggression, they respond well to more subtle threats. However, aggressive behaviour such as head butting and charging can be very dangerous. A fearful animal who is confined can be very forceful in their escape attempts, which is dangerous both to the animal and to humans.

When handling cattle it is important to remember that they don't like to be separated from the herd. You need to be aware of the animal's flight zone and the point of balance and use as little pressure as possible to reduce a fear response.

Video 3: Sheep

Sheep were the first domesticated farm species and were used for meat and milk, and much later for wool. Sheep are very adaptable and include a wide variety of breeds. While genetics are important for behaviour, life experience has a major influence on behaviour. Sheep are gregarious and tend to rest together and seek safety in the group. They will follow a leader and perform behaviours together. Like cattle, they have a complex social structure, however, they show very little overt aggression. They normally show threats, such as stomping a leg or lowering the head and they may push or rush at subordinates.

Isolation and the use of dogs are very stressful for sheep. It is best to move sheep in a group and use drafting facilities to select individual sheep.

Video 4: Horses

Equus caballus evolved as a grazer and was domesticated multiple times in multiple places, resulting in large genetic variation. Initially they were used for meat and milk and were not used for work and riding until much later. Unlike cattle and sheep, horses and their forefathers do not have horns. They do have a very strong flight response and are built for speed. They naturally live in bands within herds and usually there is one lead mare in each band. Bands consist of females and their offspring, with one or two stallions nearby. Other males live in bachelor bands. Like all other herd animals, they largely communicate through body language and use threats, rather than overt aggression. Horses are particularly sensitive to body language, including that of their human handlers.

While cattle and sheep are generally kept in groups on pasture in Australia, horses may be kept individually in paddocks or stables. This reduces the opportunities of horses to show natural behaviour, which may affect their welfare. Because horses are herd animals, they should be kept with at least one other companion. Horses have a high drive to move and graze all day, so it is important that they are provided with enough space and frequent meals. Stereotypic behaviour and stomach ulcers are frequently seen in stabled horses when management does not sufficiently take these requirements into account.

While most horses have experience with being handled, the strong flight response can make it dangerous to handle a fearful horse. Their body language will usually give you a warning of aggressive or defensive behaviour, including flight. Horses learn extremely quick from release from pressure (operant conditioning). When handling horses for veterinary treatment it is very important to not get in a situation where the pressure on the horse builds to where the horse will show a

successful escape response. This may make it very difficult to treat the horse in future. Instead take the time to release pressure to ask for an incremental response until treatment, such as eye ointment, can be applied.

Take home messages

- Understand the natural behaviour of a species, they will help you predict how they will behave
- When managing and handling an animal, work with their natural instinct
- Social animals are very good at reading body language, become good at reading theirs!