Module 18
Welfare of Working Animals
Student Activities

Questions

1. **List the main species of animals used as working animals.**

   (4 marks)

   - Equids, including horses, donkeys and mules

   - Ruminants, including various types of buffalo, cattle and camelidae

   - Elephants

   - Canines, including various breeds of dog

2. **Working ruminants may be kept to provide their owner with meat, milk or fibre. However, the principal work done by animals around the world is draught work. List four ways in which working ruminants may be used for draught purposes.**

   (4 marks)

   - Agriculture, e.g. ploughing

   - Pulling carts

   - Provide power to devices, e.g. sugarcane crushers, water pumps

   - Carrying loads (e.g. building materials such as bricks or people) on their back

3. **Describe four ways in which dogs may be used as working animals.**

   (2 marks)

   Dogs may be used as working animals in herding, guarding, hunting, transport and for human assistance (de-mining, search and rescue, and to help people with certain physical conditions (e.g. blindness, deafness, epilepsy).

4. **Identify three of the common problems for working animals.**

    (3 marks)

    - Overwork

    - Malnutrition

    - Parasitic disease

5. **Expand on the answers given above, and describe the five of the most common welfare problems for draught animals.**

    (5 marks)

    Any five of the following:

    - Overwork/insufficient rest: this is a common problem, especially when the animal is the only source of income. The owner may not allow the animal to stop working and may rent the animal to others during intensive seasons such as the ploughing season. This can create a lack of responsibility in the individuals borrowing them, and the animal may work long hours under bad conditions almost every day of the year.

    - Overloading and inadequate loading technique: overloading is a common problem, often as a result of ignorance. The weight which can be carried or pulled and the duration of work depend on many different factors such as species, breed, condition of animal, temperature and harness.

    - Inadequate equipment: if the equipment is badly designed, an animal has to use far more energy than necessary and will be working inefficiently. If there is a bad fit between animal and equipment, chafing and sores will develop and the outcome is acute pain.

    - Inhumane handling: beating, tail-twisting and prodding with sharp devices leads to acute pain, injuries, suffering and a bad human–animal relationship.

    - Working while in poor health or too young: for example, donkeys should not be used for work until they are aged four. Back deformities can result from working at too early an age. However, an owner may feel unable to wait.

    - Road accidents: travelling on busy main roads or at night without lights or reflectors are all risk factors for working animals being involved in road accidents.

    - Seasonality: outside the working season, animals may be kept on a low-maintenance diet with no exercise – this can make them very weak by the time work begins again.

    - Lack of health care: if an owner cannot afford treatment and/or allow the animal to rest, or if there is no health care available.

6. **Explain four factors that may underlie the stockperson or owner's inability to safeguard the welfare of his/her working animals.**

    (4 marks)

    • Often draught animals are owned by people with little formal knowledge about animal care. This problem may be made worse if new species or equipment are introduced without adequate training for the owner.

    • The owners may not have enough money for their own daily survival and so they have little emotional energy, and no resources, to care for their animals.

    • Another aspect of the owner's attitude can be culture-related. For example, in some countries the donkey is seen as the animal of the poor or of women, and therefore has little inherent value. When an animal has low value, they are cheap to replace, and this may contribute to owners with more than minimal income viewing donkeys as relatively disposable.

    • There may be no normal or healthy working animals in the district for owners to compare their animal against. In these circumstances, bad welfare can become the norm.

7. **The limited research that exists concerning the prevalence of lameness in working equids has indicted that this can be as high as 90–100 per cent in some countries. Identify the four most common causes of lameness.**

    (4 marks)

    • Lameness is associated with hoof problems such as overgrowth, hooves being trimmed too short, and poor hoof condition due to cracks, ulcers or thrush.

    • Arthritis/tendonitis, indicated by swollen joints.

    • Joint or soft tissue injury or wound-induced lameness as a result of falls or being kicked, which may result in abnormal angulations of joints or limbs.

    • Firing, whereby a hot iron or hot needle is applied to swollen tissue in the area of the limbs. Though believed to have therapeutic value, this actually causes further tissue damage and therefore further pain and discomfort.

8. **Old or sick animals may be unable to work, and the consequent welfare of these animals needs to be considered. Identify the welfare issues that old or sick animals face and for each suggest an alternative way of managing these animals.**

   (4 marks)

   • Old or sick animals may be abandoned or left to die. In these circumstances, there is a continued threat to their welfare in terms of enduring prolonged pain and illness if they are not receiving medical treatment, and they may experience a prolonged rather than humane death. As an alternative, animal health technicians or vets could offer humane killing to individuals, along with helping to provide owners with adequate equipment and knowledge for humane killing.

   • Old or sick animals may be sold to dealers and transported to markets. This can be particularly distressing and painful for these animals, as they are already weak or injured. They do not have much economic value and are often not provided with water or food. They may be slaughtered without being stunned, especially if there is no legislation or enforcement. Government agencies could offer money for old or sick animals and organise transport, euthanasia and disposal. This would be more efficient than individual efforts, it would make it easier to arrange disposal, and it would be better for the animals.

9. **Changing a working animal owner's behaviour is often necessary in order to improve the animal's welfare. Vets may make recommendations to a working animal's owner but it cannot be assumed that the owner will adopt these and make the necessary changes. Explain the type of approach vets can take to increase the likelihood of changing the owner's behaviour, briefly providing an example.**

   (3 marks)

   Participatory learning can be used to encourage human behaviour change. This approach encourages and supports owners to identify their own animal's needs, to set their own objectives for improving welfare, and to plan, implement, monitor and evaluate their own initiatives. For example, by involving the owners themselves in generating a list of regular actions they can take to care for their animals, the owners can monitor themselves using a monthly checklist.

10. **Working equines, cattle and camels are commonly fitted with various forms of harness in order for humans to be able to use them for work, or to tether and restrain them when required.**

    a) **Using examples, describe two areas of welfare that may be poor as a result of using ill-fitting harnesses.**

       (2 marks)

       Ill-fitting harnesses and tethers may threaten the welfare of working animals in terms of their ease of movement and their health. Working animals may experience pain if harnesses or tethers lack the necessary padding and so rub on their skin, causing sores and lesions. Harnesses attached to certain body parts (for example, to the horns or to the nose via a rope-to-nose ring), can cause tension and tearing of flesh in those regions, with associated pain. Restrictions on ease of movement associated with tethering can prevent an animal from performing other important behaviours such as eating, drinking, resting and seeking shelter.

    b) **Explain how owners can improve the quality of harnesses in order to reduce skin injuries to their working animals.**

       (3 marks)

       - Owners can change the material they use to pad harnesses and equipment. A variety of soft materials should be used; materials like plastic bags or rubber from tyres are not suitable.

       - Owners can use string or twine instead of wire to repair harness.

       - Owners can clean the harness and the animal, and dry them before they put the harness on. If there is not enough water, they can brush the animal every day, and scrape the sweat and dirt from the harness.

11. **What are the most common welfare problems in working elephants in terms of nutrition, housing, health and behaviour?**

    (4 marks)

    - Working elephants may experience prolonged hunger due to receiving inadequate nutrition in terms of the amounts and/or quality of food.

    - It may be difficult to provide elephants with appropriate housing, because the size and nature of the environment elephants are adapted to is hard to replicate. Where elephants are confined or restrained, discomfort may ensue.

    - Elephants may face challenges to their health due to skin injuries from ill-fitting harnesses and saddles, or the lack of ability to wallow in water/mud as required. Poor foot conditions may also arise from weight-bearing and walking on hard surfaces such as concrete.

    - Appropriate behaviour may be thwarted as elephants, not being a domestic species, can face environmental restrictions on the range of natural behaviour they are able to perform when captive.

In-class activity

Discussion

Allow 45 minutes for this activity.

This discussion will focus on assessing and improving the welfare of a category of working animals of your choice.

Notes to lecturer:

In small groups or as a class, ask the students to identify potential welfare issues and prepare advice and guidelines for a farmer/owner in order to help improve the welfare of his/her animals. Choose from the following:

- working equids (horses, mules, donkeys)
- bovines (buffalo, cattle)
- camelidae (camels, llamas)
- elephants
- dogs.

Discuss the following as a class or in small groups (if in small groups, report back to the rest of the class afterwards).

- What types of activities/work the animals do.
- Where and when the animals are used.
- What owners do to keep their animals healthy and happy.
- Describe all the different behavioural signs that could be used to understand how the animals are feeling.
- Identify the positive and negative factors influencing the feelings and behaviour of the working animals.
- Discuss how to improve the negative situations.

Consider:

- welfare inputs, e.g. cart design, weight, working hours, and temperature
- welfare outputs: physiological parameters (body temperature, respiration rate, etc.), body lesions, tendon problems
- human behaviour change and participatory learning activities
- prevention and treatment.

Applied Learning Opportunities

(1) Behaviour observation exercise

Design a behavioural ethogram and complete behavioural observations on a type of working animal that you have access to. The type of working animals could be:

- working equids (horses, mules, donkeys)

- bovines (buffalo, cattle)

- camelidae (camels, llamas)

- elephants

- dogs.

Note to Lecturer:

Students will need to design a data sheet to enable them to record elements of the environment and the behaviour they witness during their observation of the animals. Students may have a good idea of the behaviours they will observe, but should leave space to write any unexpected behaviours. They should decide whether they will observe an individual animal for the entire duration of the observation, or whether they will observe a group of animals before they begin. They should keep a record of the number of times a particular behaviour is exhibited during the observation.

The following table is suggested as a data sheet:

Date of visit			Start time:		End time:	
Establishment (or description of environment)						
Breed of animal:		Age (range if a group observation):		Individual or group observation?:		
Relevant characteristics:						
Environment						
Space allowance:		Socially/ individually housed?		Group size:		
Description of harness or tether if applicable						
Methods of control by humans	*e.g. whipped, beaten, enticed with food, tethered*					
Feeding methods and routines:						
Behavioural Ethogram						
Behaviour	**Frequency (or duration)**					
e.g. feeding	III					
e.g. working	I					
e.g. drinking	IIII					
e.g. vocalising	IIII					

After completing the observation, students should produce a report describing what they have seen,considering the extent to which the animals' need to perform certain behaviours is being met. They should then make conclusions about the welfare status of the animals. They could also consider what could be done to provide the animals with opportunities to perform specific behaviours that are important to them.

(2) Welfare assessment exercise

Prepare and conduct a welfare assessment protocol for a type of working animal that you can observe or have experience of working with.

Students can complete this exercise individually or in groups. The type of working animals could be:

- working equids (horses, mules, donkeys)

- bovines (buffalo, cattle)

- camelidae (camels, llamas)

- elephants

- dogs.

Students will need to consider what they have learnt about the principles of animal welfare science and use this exercise as an opportunity to apply these principles and gain in-situ experience in assessing the welfare of animal species in the contexts of farming, laboratories/research, zoos, companion, and other situations (e.g. entertainment). Students will need to gain access to animals in these contexts in order to complete this animal welfare assessment exercise.

Notes to lecturer:

The use of animal-based measures (outcome measures) is thought to afford the clearest information about the actual welfare state of an animal in terms of their behaviour, health and physiology. However, it is also important to consider the aspect of the animal's environment (welfare inputs) that may also affect animal welfare, for example in terms of housing design and resources. Therefore students will need to evaluate the welfare of animals in each situation based on the animals' physical condition and behaviour in association with factors such as housing, nutrition, veterinary care, human-animal interactions.

The data sheet below contains an example of specific measures for use with a generic working animal. Depending on which species and context the students are assessing, they will need to adapt or develop the measures they are going to use.

Welfare assessment protocols are currently in development for sheep, goats, turkeys, horses and donkeys as part of the Animal Welfare Indicators (AWIN) project (see AWIN website for further details: www.animal-welfare-indicators.net/site/index.php/work-package-1).

Welfare Principle	Welfare Criteria	Measures for working animal
Good feeding	Absence of prolonged hunger	*Body condition score*
	Absence of prolonged thirst	*Water supply*
Good housing	Cleanliness	*Cleanliness*
	Behaviours around resting	*Time needed to lie down*
	Ease of movement	*Presence of tethering*
Good health	Absence of injuries	*Lameness score*
	Absence of disease	*Respiratory disorders Enteric disorders* *Reproductive disorders* *Other parameters*
	Absence of pain induced by management procedures	*Routine mutilations*
Appropriate behaviour	Expression of social behaviour	*Indices of agonistic behaviours*
	Expression of other behaviours	*Qualitative behaviour assessment*
	Good human-animal relationship	*Avoidance distance at the feeding place*
	Positive emotional state	*Avoidance distance*

(from the Welfare Quality® Assessment protocol for cattle, available free online as a pdf from the Welfare Quality® website: www.welfarequality.net/everyone/43148/9/0/22)

Encourage students to consider their findings and how they relate to any welfare criteria included in existing food quality assurance schemes standards or associated legislation.

During class time at a later stage of the term when the welfare assessments have been completed, try to encourage students to discuss, compare and contrast their findings and what worked and didn't work with other students/students groups, particularly if students have conducted welfare assessments on one animal species in a specific situation/context.