



Esetjiesrus Donkey Sanctuary

# DONKEY BEHAVIOUR AND HUSBANDRY

A GUIDE FOR ANIMAL WELFARE  
PROFESSIONALS, OWNERS AND CARERS



## About Eseltjiesrus Donkey Sanctuary

Eseltjiesrus Donkey Sanctuary (EDS) was established in McGregor, South Africa, in 2007.

Our mission is to promote the welfare and status of donkeys through a culture of caring, which extends from donkeys to all animals and to all living beings and the environment.

By raising the status of donkeys, many related welfare issues can also be addressed.

This manual which augments the outreach and training conducted by EDS in South Africa, presents notes on donkey behaviour and husbandry, to promote better understanding about donkeys and their needs.

Material is backed by national and international sources.

We welcome constructive feedback to improve our content. This will allow us to update the content of this publication on a regular basis.

*Disclaimer: Material is produced for no monetary gain and is intended for educational and informative purposes.*

*We accept no liability for any errors or mis-use of information.*

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Editor: Annemarie van Zijl

Thank you.

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# Donkeys are not little horses with long ears!



## Donkeys differ from horses and mules in many respects: physical, mental and emotional.

### Some differences between donkeys and horses

	Horses	Donkeys
<b>Coat</b>	More oils, more weatherproof	Less natural oil, coarser, gets wet through
<b>Hooves</b>	The ideal hoof angle is around 50° for the front and 52° for the hind hooves	Boxy, hoof angles up to 10° more upright, trimmed differently, shoes generally unnecessary
<b>Mane</b>	Long	Usually short and upright
<b>Forelock</b>	Long	Usually missing or upright
<b>Chromosomes</b>	64	62
<b>Responses</b>	Strong flight response	Strong fight and freeze responses, more territorial
<b>Reaction to negative stimuli</b>	Pronounced	Stoical. Hides reactions to pain and discomfort
<b>Vocalisation</b>	Neigh and nicker	Bray: vocalizes on in- and out-breath
<b>Feeding</b>	Horses graze	Donkeys browse and graze
<b>Gelding</b>	Can be done standing	Done under general anaesthesia
<b>Terminology</b>	Male – stallion Castrated – gelding Female – mare	Male - jack Castrated – gelding Female - jenny

**Ears:** The long ears of the donkey, well supplied with blood vessels, are a desert adaptation for cooling the body.

**Tail:** The donkey's tail is covered with short body hair except for the tuft on the end.

**Vertebral column:** The donkey, like the Arabian horse, lacks the fifth lumbar vertebra normally found in the spinal column of other equine skeletons.

**Vestigial teats:** The male donkey usually has vestigial (remnants of) teats on the prepuce, unlike the horse.

**Bonding:** Donkeys can form lifelong friendships and should not be kept alone.

**Lungworm (Dictyocaulus arnfieldi):** Lungworms can be present in large numbers in the donkey without the animal showing any signs. However, the donkey can pass on the infection to the horse, which will suffer from lung problems, with discharge from the nostrils and coughing. If donkeys and the horses that are kept with them are appropriately dewormed, this should not be a problem.





# The evolution of donkeys

The ancestors of today's domesticated donkeys evolved in the semi-desert regions of North and East Africa, travelling long distances in search of sparse vegetation and a limited supply of water. In an open environment with limited natural resources, donkeys will graze and browse on vegetation with low nutritional value for 14 to 18 hours per day, regularly walking distances of 20 to 30 km in 24 hours. This search for food, and the environment in which these donkeys live, keep them mentally stimulated, fit and lean.



In nature, donkeys tend to not form large herds that are more typical of other equines. Instead, they form small groups or pairs, searching for food and water and only coming together to breed, or when environmental resources are plentiful.

## Domestication

Donkeys have been used as working animals for thousands of years and are still a lifeline to families in many parts of the world.

The domesticated donkey lives in a restricted environment where food may be readily available, and fencing restricts the distance they can travel. Domestication presents donkeys with many challenges, such as overwork, working

too young, under- or over-feeding, boredom, poor social interaction, and the complexities of human interaction.

Environment plays a huge role in the behaviour of donkeys, and their management must compensate for the deficits domesticated donkeys may experience in their daily life. Correct diet, companionship, movement, and mental stimulation are all vital if domesticated donkeys are to be able to exhibit normal behaviour.

## Getting to know donkeys

### Feeding/diet

Having their origins in regions where vegetation is dry and sparse, donkeys adapted to a high fibre diet, preferring a varied diet of mainly highly fibrous plant materials. Rather than just grazing on grass, donkeys also feed on a variety of dry grasses, shrubs, and tree branches and bark.

A donkey's sense of taste enables them to distinguish between edible and inedible foods as they graze and browse. Although donkeys are adapted to arid conditions, they need a readily available source of clean, fresh water to prevent dehydration and its associated health issues.

### Lifespan

Donkeys that are well cared for can live for 35 to 40 years, sometimes longer, especially when poor dentition and skeletal issues have been regularly addressed over their lifetime.

Working donkeys in poor countries have a life expectancy of only 12 to 15 years. Deaths are caused by road accidents, parasite infections, attacks by predators, overwork, inadequate nutrition, and fighting amongst herd members.



# Natural behaviour of donkeys

The donkey's behaviour is different from that of horses, ponies and mules. Donkeys' behaviour is controlled and influenced by a wide range of factors, and false assumptions about a donkey's true nature usually stem from some common myths. The nature of donkeys is not to be aggressive, stubborn or difficult but purely to learn and survive. While donkeys have good memories and learn very easily, they are also adept at learning how to avoid activities they find difficult, frightening or painful. There is a reason for everything donkeys do so it is crucial to take this into consideration when examining donkeys, and attempting to carry out procedures.

## Notes for handlers



A donkey's behaviour will be influenced by the ability, experience and confidence of its handler. A nervous handler will increase the nervousness of the donkey. Anyone intending to handle a donkey should gain as much knowledge and experience as possible, prior to interacting with it.

## Be calm



Remember to stand and observe before entering the donkey's space. Consider your own body language – be small, quiet and unaggressive.

Experiences during a procedure can affect future behaviour.

- The donkey's long term memory could make handling the donkey dangerous in the future.
- Results from any blood samples taken may be affected by stress levels.
- Any sedation or anaesthetic may be compromised.

## Beware of labelling!

When a donkey (or any animal) is labelled as "difficult, naughty or bad", the expectation and behaviour of the handler may change accordingly and the animal's behaviour will reflect how it has been labelled.

**Move as though you are moving through thick oil**

*– Ben Hart, Behaviourist at The Donkey Sanctuary*

## Defence mechanisms

### Flight, fight or freeze responses

As a natural prey animal, anything that the donkey considers threatening will prompt the flight response. If a donkey is restricted in its ability to move away, it will either 'freeze' to assess the situation, or use the fight response to save itself.

Because they often live in pairs, small groups or on their own, flight is often not the best defence mechanism. They do not have the protection of being in a large group while fleeing.

Fight behaviours are therefore more strongly established.

Fight behaviours can lead to aggressive behaviour towards

smaller animals such as sheep, cats, dogs and chickens. When defending their territory, donkeys may regard them as intruders and chase them.

### Social bonds

Social relationships are important. A single donkey will seek attention, will bray often and show signs of anguish or depression.

Most domestic donkeys prefer to form bonds with other donkeys. However, they will occasionally form a strong bond with horses, ponies, mules or even other species if no donkeys are close by. Always respect such bonds.







Once a social bond between certain donkeys has been identified, it is important never to separate these companions as this will cause tremendous stress. Always work with them together.

Due to the formation of strong pair bonds, donkeys can suffer significant stress when their companion is removed, dies or is euthanased. When a donkey dies, allow its friend(s) to stay with the body until they have lost interest, otherwise it may cause stress and even result in life-threatening conditions such as hyperlipaemia.

### Leadership

There often seems to be no specific order of leadership within a group of donkeys. There may be a dominant male as far as mating goes, but other complex social relationships often form within a group of donkeys.

### At rest



Donkeys can rest lying down or while standing. Resting often seems to be a communal activity, with one donkey remaining alert. One hind leg may be rested by removing weight from it.



### Grooming



Donkeys moult and shed winter coats. They will rub against trees and fences. Donkeys also groom each other and may have a specific grooming partner in a group.



Donkeys often roll, shake and groom after resting. This revives flattened coats, removes some ectoparasites and moulted hair. There is usually a favoured sandy rolling patch used by herd members in turn.





On standing up a donkey shakes its head while a horse shakes its whole body.

**Be aware that rolling can be a sign of colic:** then the donkey will roll anywhere, repeatedly, and not shake its head on getting up.

### Sensory perceptors

Donkeys are sophisticated visual communicators. Much information is shared through posture and slight postural changes. They can be startled by items at the edge of their field of vision.

Always approach donkeys from the side, as they have good peripheral vision but have blind spots right in front of them and behind them.

### Long Ears



Donkeys have a keen sense of hearing. Always speak quietly and calmly to a donkey when approaching it.

### Vocalisation



Donkeys have a wide range of vocalisations of which the most well-known is braying. The sound of a bray can travel over long distances and each donkey's bray is individual to

### Sense of taste



Donkeys' sense of taste enables them to distinguish between edible and inedible foods as they graze and browse. They prefer a varied diet of mainly highly fibrous plant materials. Their sensitive lips covered by thousands of touch-sensitive hairs play an important role.



# Understanding donkey language

The key to working with donkeys is to accept that to the donkey there is always a reason for a particular behaviour. A donkey will assess a situation before taking action. It is we humans that sometimes find their behaviour difficult or inappropriate. Try to look at things from the donkey's point of view and understand what the donkey experiences. "Think like a donkey."

## Communication between donkeys



The ears play an important role in their body language. Ear movement is observed by fellow herd members. The tilt of their ears can indicate interest, fear, happiness or annoyance.

- The ears are positioned gently forwards when greeting another donkey or focusing on something.
- Assertive animals hold their ears flat back when dealing with a threat.
- The ears are held firmly forward during sexual advances.



The practice of handling donkeys by grasping or twisting their ears is not only painful but can lead to permanent nerve and muscular damage, preventing the donkey from communicating normally with its fellows as well as affecting its hearing.



Donkeys communicate with each other through the use of body language and actions such as biting, kicking or running away. This is normal behaviour and they use this way of communication with humans as well.

## Threatening behavior

- Mild biting threat – ears lay slightly back, neck is extended towards the opponent.
- Strong biting threat – ears are right back, mouth slightly open, ready to bite. If the threat or opponent moves away, they will not follow through.
- Mild kick threat – ears laid back, rump turned towards the threat.
- Strong kick threat – if the threat remains, the rear hoof will be lifted and tail lashed before the kick is delivered.



Donkeys can buck and kick sideways powerfully. They can also be very effective when kicking forwards with their hind legs. They can make contact with a handler who is examining a forelimb.

## Appeasing behaviour (jawing)

This is submissive behaviour shown by subordinate animals or by a donkey requesting grooming. It looks like an exaggerated chewing movement in which the lips don't meet, the jaw moves up and down with the corners of the mouth drawn back. The ears are held out sideways and the neck is horizontal.





## Affiliative behavior



Displayed to reduce the distance between donkeys. This includes greeting behaviour, mutual grooming and play. Greetings are given by touching with the nose to the nose, flank, rump or shoulder. The ears are directed forward.

When the ears are laid back – be careful as the donkey may feel nervous or threatened. When the ears are facing forward, the donkey is interested and curious and may want to interact.

Always look at the whole donkey, as some do not have full use of their ears due to old age or mutilation of their ears.

## Reaction to pain

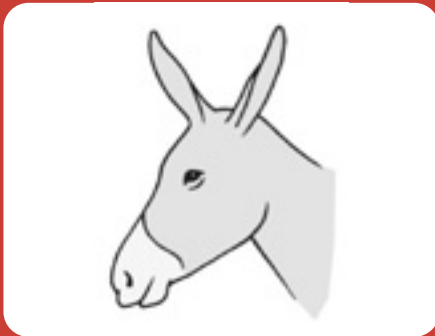


A donkey is unlikely to show the dramatic signs of pain and distress exhibited by a horse or pony, even when it may be experiencing the same degree of pain. Appearing strong and normal reduces the chances of being attacked by a predator. The term 'stoic' is used to describe this characteristic.

This does not lessen the donkey's ability to experience pain and distress.

Detecting illness in the donkey is made more difficult by its stoical nature. Dullness and depression may be the only symptoms exhibited. Dullness includes loss of appetite and lack of reaction to stimuli. This means that a donkey may be in the advanced stages of a disease before it is noticed or a diagnosis is reached.

**The dull or unusually quiet donkey should be regarded as a veterinary emergency.**



*Ears upright - happy and at ease*



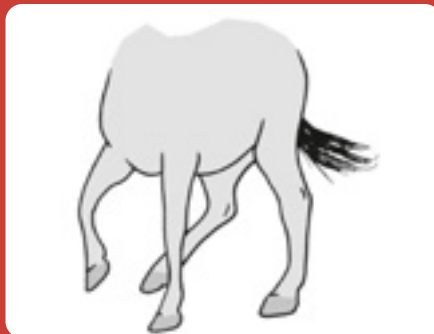
*Ears forward - alert*



*Resting*



*Ears back - cross or unhappy*



*Stamping - about to kick*



*Swishing tail - stay away*

Signs of pain, fear and stress may be subtle and easily overlooked.

The flight responses may include:

- turning the head away from the handler
- stepping sideways slowly to avoid being caught
- 'freezing' in the presence of a fearful situation.

The fight responses can be a health and safety risk to both the animals and people and may include:

- stamping, pawing and kicking out

- head tossing
- biting
- leaning or pushing into the handler (dangerous when the handler is against a solid object).

Both flight and fight responses increase stress levels and a concomitant risk of hyperlipaemia (an elevated level of fatty elements in the bloodstream). Recognition of these stress responses at an early stage allows intervention to remove or limit any factors causing fear in the individual.

## Pain indicators in donkeys

[https://www.researchgate.net/publication/343629425\\_Development\\_of\\_a\\_Donkey\\_Grimace\\_Scale\\_to\\_Recognize\\_Pain\\_in\\_Donkeys\\_Equus\\_asinus\\_Post\\_Castration](https://www.researchgate.net/publication/343629425_Development_of_a_Donkey_Grimace_Scale_to_Recognize_Pain_in_Donkeys_Equus_asinus_Post_Castration)



By Emma K. Orth, Francisco J. Navas González et al

This study established a donkey ethogram followed by a donkey grimace scale. Facial and body language markers related to the ears, eyes, muzzle and nostrils, and stance were identified

as possible pain indicators. Diagrams are in the publication.

The overall appearance of the donkey and its body stance are significant indicators. This indicates the importance of observing more than just the face of the donkey to identify signs of pain.

Other studies have confirmed that indicators of a donkey in pain may include sham eating, generalized dullness, shifting weight to the contralateral limb, decreased mobility of the ears, twitching of the tail, and holding the tail tucked.

## Common behavioural problems

'Problem' behaviours are often normal behavioural responses that serve a purpose for the individual animal, but may be undesirable for the owner.

### Stubborn behaviour

The donkey has a reputation for being stubborn and unwilling. This is because the donkey shows reluctance without displaying the body language of the horse or pony. The actual cause of the behaviour is more likely to be fear, pain, lack of motivation or clarity of instruction.

### Wood chewing

This is linked to the donkey's natural browsing habit. Donkeys should have constant access to fibrous forage to fulfil their need to graze for 14—18 hours a day. Examples include suitable straw or hay, and the bark, branches and leaves of non-poisonous plants.

### Territorial instincts - Attacking other livestock or companion animals

Donkeys' territorial instincts mean that they can be used to guard herds of stock against predators. This same territorial nature can result in donkeys chasing and attacking small animals such as sheep, goats, poultry, cats and dogs, as they view these as intruders. Ideally donkeys should not be kept in mixed species groups. If this is unavoidable, the animals should be introduced to each other gradually. It is important that all the animals have an escape route out of the field/shelter.

### Difficulty handling feet

It is essential to accustom the donkey to having its feet lifted, picked out and filed or trimmed. To prevent unbalancing the donkey care should be taken to hold feet as low as possible and not abducted from the body.

### Medical conditions

There are numerous medical conditions that may lead to changes in behaviour or the development of problem behaviours. These include cystic ovaries, hormonal conditions, mineral and vitamin deficiencies, brain tumours, blindness, hearing loss, skin conditions, photo sensitivity and food intolerances, to name but a few. Care should be taken to ensure an accurate diagnosis and treatment programme.

Refer to *Clinical Companion to the Donkey* published by The Donkey Sanctuary.

### Rewards

Not all donkeys are motivated by the same rewards, nor are they motivated to the same levels. Being patted is not a positive experience for the donkey. Patting is very similar to swatting a fly or smacking the animal.

It is more effective to scratch the animal as a reward for desired behaviour. The use of scratches to motivate the animal is reminiscent of two donkeys mutually grooming each other. Scratches at the withers are most effective.

### For further reading

<https://www.thedonkeysanctuary.org.uk/all-about-donkeys/behaviour/understanding-donkey-behaviour>



<http://www.ebta.co.uk/donkey-research.html>

<https://www.mdpi.com/2076-2615/13/9/1466>  
A Pilot Study on Behavioural and Physiological Indicators of Emotions in Donkeys





# Mules



A mule is the product of a horse mare bred to a jack, and a hinny is the offspring of a horse stallion crossed with a jenny.

Horses have 64 chromosomes, donkeys have 62 and therefore cross breeds will have 63 chromosomes, which is why they are infertile.

Mules exhibit some characteristics of each parent breed. Mules are one of the most commonly used working animals in the world, highly prized for their hardiness.



An interesting case study with a mule: see [bray.news/4last47](https://bray.news/4last47)

## Further information

<https://animalscience.ucdavis.edu/news/uc-davis-research-seeks-unlock-mule-health-through-pictures-video>



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# Handling donkeys



Take time to massage gently along the topline to the tail. A gentle rub under the root of the tail is appreciated – they will lift the tail to one side.

**Personal preference:** when using a halter it is safer not to push the strap through the last edge of the buckle. The halter may catch on objects if the animal breaks loose and is avoiding human contact. Leaving the strap's end loose makes it easier to remove if the donkey panics.

Donkeys should be handled regularly. It is important for the animal to be tractable in the case of an emergency.

Accustom the donkey to being touched gently but firmly all over (be wary of under the belly). Accustom them to procedures such as cleaning eyes, hooves, farrier work, pinching the skin as for an injection, even rectal temperature monitoring. Become familiar with the “topography” of your donkey so you can easily identify any bumps, lumps or little wounds.

Donkeys, like horses, have a blind spot immediately in front of them and behind them. Speak to the donkey quietly as you approach it from its side. Voice commands are important and effective once learned.

Approach and work from the near (left) side but also accustom the donkey to being handled from the off (right) side.

Don't touch the ears before you have touched the donkey on the neck. Ears are not handles! Many donkeys, but not all, enjoy the inside of their ears being rubbed with a knuckle.



Take care to never put a halter or hay net on the ground: a donkey can easily become entangled in it and panic.





When leading, stay level with the donkey's head. A short lead rein is preferable in case the animal pulls loose. A long lead rein can get caught up in the legs.

Treats are effective training devices but beware of the donkey learning to barge or nip. Offering a small treat or meal every evening will teach the donkey to return to a selected area.



Apples must be cut up into smaller pieces and carrots sliced lengthwise. Treats are presented on the flat palm of the hand to avoid the fingers being bitten.



Tethering and hobbling (tying legs together to limit movement) must be discouraged. Where practical, good fences (not barbed wire) and secure gates are essential. This creates extra husbandry demands.

Excellent behaviour and handling information is available from behaviourist Ben Hart

<https://www.thedonkeysanctuary.org.uk/news/behaviour-in-everything-we-do>



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# Husbandry



Husbandry or caring for donkeys includes day-to-day care, management, nutrition, managing breeding, the raising of youngsters and end-of-life situations. It ensures appropriate living conditions, keeping the animals disease-free with regular monitoring of their well-being.

## Correct husbandry allows animals to not only survive, but thrive.

A healthy donkey can work more effectively and this is of benefit to its owner and the environment: One Health, One Welfare.

Recognise the importance of consultations with the animal keepers. Without their collaboration, most veterinary interventions remain a symptomatic treatment. Sensitive consultation and support can prevent unnecessary disease and suffering in many cases. This is a core part of your work as animal health professionals. The role of the veterinary professional is to strive for physical and mental health in the animal.

## Interventions



Ideally donkeys need regular hoof care, dental and veterinary examinations, vaccinations, and appropriate deworming. For many working donkeys this will remain an unattainable dream.

## Daily care

Donkeys should be handled daily to monitor their condition and to ensure that interventions can be safely done when necessary, and with minimal stress to the donkey.

Routine care includes daily inspection, grooming, cleaning eyes and hooves, checking the entire body, and fly control.

Signs of a healthy donkey:

- The donkey should be alert and aware, interested in what is going on around it
- Ears should be pricked
- No donkey should spend prolonged periods lying down
- Healthy donkeys should be able to get up and down easily
- Move freely without limping, taking their weight equally on all four legs
- Eyes should be clean and bright, open and free from swelling or discharge
- The nostrils should be clean and free of discharge
- At rest there should be only slight movement of the nostrils as the donkey breathes.

## Grooming



Grooming provides a chance to examine the donkeys for any bites, wounds or skin complaints. Grooming also helps the handler to build up a bond with the donkey.

Grooming procedures are similar to those for horses. Donkeys may have thicker coats than horses and enjoy being brushed/combed with a stiff-bristled brush. They may shed winter coats and even change colour with the seasons.





Do not brush a donkey when the coat is wet, as this will allow water or dirt to reach the skin and this increases the chances of skin infections such as rain scald.

Any discharge from the eyes, nose and tail areas can be wiped with damp swabs. To prevent the risk of cross infection use a separate swab for each eye and each nostril and the tail area. Dispose of all soiled swabs carefully.

## Hoof care and farriery



Picking up feet – similar to horses but don't lift the foot too high. Many farriers don't like to work on donkeys as they have to bend much lower than with horses.

- Hoof walls are more upright than in horses (5–10° more).
- Hoof-pastern axis is more upright.
- Frog is usually wider than in the horse.
- Sole is U shaped with a flare to the heels.
- White line should be 1mm wide (an increase could indicate laminitis or white line disease).
- Heels need trimming regularly.
- Donkeys' hooves have a higher water content and are more 'elastic' than horse hooves.



<https://www.thedonkeysanctuary.org.uk/for-owners/owners-resources/how-to-work-with-donkey-feet-and-handling-issues>

<https://www.thedonkeysanctuary.org.uk/for-professionals/clinical-care/foot-care>



## Vital signs – 'TPR'

Ideally, getting to know what is normal for a particular donkey is very important so that any changes can be measured against the normal range for that individual.

Begin with respiration, as it is the least intrusive vital sign to measure.

**Respiratory rate:** Average 12–20 inspirations/min. Measure this with the donkey undisturbed. Stand back and watch the rise and fall of the flank or chest. Count the number of breaths (a "rise" and "fall" = one breath) in 15 seconds and multiply by 4.

Flaring of the nostrils, a marked rise and fall of the ribs and flanks, or any noise associated with the donkey's respiration should be further investigated. Exercise, stress, excitement and fever will increase the rate and depth of respiration.

**Temperature:** Normal values: Adult Range 36.2–37.8°C. Average 37.1°C.

Young donkeys up to 2 years old: 36.6–38.9°C.

Taking a donkey's temperature regularly will get the donkey used to this procedure, and allow recording of their normal temperature range.

**Pulse rate:** Normal range: 36–68. Average 44 beats/min.

Keep the donkey's head still with a hand above the muzzle. Use the fingertips of the other hand to locate the artery that runs under and across the lower jaw. The pulsations correspond to each heartbeat. Count the number of pulses felt in 15 seconds and multiply by 4.

## Deworming

The trend over the decades has been to deworm all donkeys that are present at an outreach action. Now this is being questioned, with evidence of increasing antihelmintic resistance (AHR). Once the less resistant worms are out of the way, the more resistant worm species emerge to cause problems. De-wormers should only be used after a definitive diagnosis that worms are the underlying problem.

There is increasing awareness of the huge differences in egg-shedding between individual hosts, with some individuals observed to be super-shedders.

If worms are considered a herd problem, it is best practice to take individual identified faeces samples and then only treat the high-shedding individuals. This is often impractical in rural settings. In rural circumstances it has been suggested that ivermectin once every one to two years may be the best affordable treatment.

Other recommended measures to control worms are to remove manure regularly, to rotate grazing, and to allow other species to co-graze. Except for the last one, the other measures may not be practical in a rural working donkey set-up.

## Breeding

Starting from about one to two years of age, female donkeys come into season for four to six days roughly every three weeks. During this period they may be difficult, or extremely social. Behaviour will vary according to each individual donkey.

The gestation period lasts for 12 to 14 months. Natural weaning occurs after six to twelve months.

When a foal has been socialised with other donkeys and allowed to develop correctly through the phases of juvenile development, it is less likely to exhibit behavioural problems as a mature animal.

Jacks reach sexual maturity at about three years of age but may exhibit mating behaviours from about 18 months. The optimal age for gelding is between six and eighteen months. Persuading rural owners to geld their jacks, and offering the correct veterinary procedure, are challenges to overcome. There is also the belief that jacks are better workers than geldings.

Donkey stallions are territorial and can become very aggressive, especially in the presence of competing males and females in season.



Tail bitten off in a fight between jacks.

### Areas of care

**Nutrition:** see the chapter on Nutrition for donkeys on P18

**Environment:** Stabling is not necessary. Three-sided shelters correctly positioned against the prevailing elements, with weather-proof roofing, are sufficient. A safe, enclosed handling area is useful for examinations and treatments. Accustom the donkeys to being handled quietly in there.

**Where practical, manure should be removed regularly.** This also offers the opportunity to monitor the health of the donkey(s).

### Common skin conditions

Parasites – a number of ectoparasites can cause problems.

**Flies** can cause great distress and irritation. They can spread infection especially around the eyes, and lay eggs in wounds. Some donkeys suffer large swellings when bitten.

To prevent fly problems, good management includes removing manure frequently and depositing it far away, providing field shelters, using fly fringes or masks and fly repellent. A number of fly repellent preparations are available. They tend to be expensive. Always read and follow the safety data for the product.

**Midges** - midges cause the condition 'sweet-itch' in hypersensitive (or allergic) donkeys. The midges are very active at dawn and dusk and their bites cause intense irritation to the donkey, leading to excess rubbing, especially on the mane and tail areas. The sore areas may bleed, attracting more insects. Prevention is most effective but can be difficult. Use fly repellents several times daily, and keep donkeys away from wet areas where midges congregate. All these measures may be impractical in a rural setting.

**Culicoides midges act as vectors for African Horse Sickness.** The females typically bite at dusk or dawn and usually in the vicinity of water, marshes or rotting vegetation.

**Mites:** There are a number of mites that cause intense irritation. Some types live on the donkey, others live in hay and straw. They cause irritation by biting, usually on the lower legs or around the head and neck. You can identify these on skin scrapings. Various insecticide preparations are available.

**Lice:** Unlike mites lice are quite easy to see with the naked eye. They cause rubbing and hair loss. A number of anti-lice preparations are available and may need to be used more than once to kill off any unhatched eggs.

**Ticks:** ticks are found in areas of long grass or where other species have grazed. Usually ticks cause mild irritation at the site of the bite, and are implicated in the spread of some diseases. Appropriate insecticides will kill them. If pulled out, leaving the head in, an area of irritation can persist.

**Rain scald and mud fever:** These conditions occur when the skin/hair is wet for a long time. Rain scald affects the shoulders/back and rump, while mud fever affects the lower limbs. The organism responsible is dermatophilus and causes crusting and matting of the hair coat. When the hair coat is pulled out there is pus beneath the scabs. Treatment involves antiseptic washes, good hygiene and dry conditions. A course of antibiotics may be required.

**Ringworm:** This fungal skin condition is contagious. Lesions can appear as circles with hair loss, but can also take different forms and become widespread. Washes are used on the affected animal and the environment should be disinfected. Ringworm can be transmitted to humans so gloves should be worn and hands washed thoroughly after handling the animal.



<https://www.thedonkeysanctuary.org.uk/for-owners>







### **End-of-life**

When it is clear that a donkey no longer has a good quality of life, euthanasia by a qualified veterinary professional is advised. Turning out a former working donkey and leaving it to its own devices unfortunately often happens. Increasing loss of mobility, coupled with the inability to reach water or consume sufficient nutrients, results in slow starvation and ultimately a distressing death.

When a donkey has died, by whatever means, it is essential to leave any companions with the body until they lose interest. This normally takes only an hour or two.

### **Donkey farming**

Donkeys are not production animals! The species has unique behavioural requirements, and a lack of knowledge or understanding can result in welfare problems caused by the handling and management in a farming set-up.

Examples of stressors in a farm situation are the inability to graze and browse for long periods and to express normal

behaviour. High levels of stress in farmed donkeys could lead to increased mortality rates and reduction in fertility.

Refer to booklet 'Welfare of donkeys'  
<http://www.donkeysforafrica.org/Resources/Welfare-of-Donkeys-in-South-Africa.pdf>



For further reading and reference:  
<https://www.thedonkeysanctuary.org.uk/for-professionals/professional-resources/the-clinical-companion-of-the-donkey>



<https://www.thedonkeysanctuary.org.uk/for-professionals/professional-resources/the-clinical-companion-of-donkey-dentistry>



# Nutrition for donkeys

Donkeys are monogastric herbivores (plant-eating animals with a simple, single-chambered stomach). They evolved to have a steady flow of dietary fibre moving through the gut at all times. They are described as “trickle feeders”. Donkeys evolved in arid semi-desert areas and keep condition well on dry grass and other dry vegetation, rather than lush green grass.

The digestive tracts of donkeys and horses are similar in structure and function, but donkeys have greater digestive efficiency than horses or ponies when digesting highly fibrous forages.

Assuming that they have the time to eat, donkeys will consume dry matter equivalent to 2 - 2.5% of their live weight per day, while larger horses will eat dry matter equivalent to 2.5 - 3% of their live weight per day. Compared to the horse, the donkey is better at digesting roughage feeds and so will tend to digest a greater proportion of the dry matter than the horse given the same roughage diet.

Fibrous forage is the basis for a donkey's healthy diet. Lower quality forage, that may be too mature for a horse, can be suitable for a donkey. However, mouldy or contaminated forage is not suitable. In temperate climates the forage available is often too abundant and too rich, with a high level of plant cell content that is very nutritious and easily digestible, while being low in fibre.

Donkeys need a high roughage diet with a low level of carbohydrates and less protein, but more fibre than horses do. The majority of their diet is best supplied using straw or the leaves and stalks of field crops such as corn, maize or sorghum. This can be supplemented with a moderate quality hay and/or grazing if necessary, depending on what is available locally.

Donkeys tend to retain fibre for a longer period to maximize digestion, which can sometimes lead to a “hay belly” appearance.

**Note: do not feed straw to horses. There is a high risk of compaction in the gut.**

The nutritional demands of donkeys can vary over the year, depending if they are doing a lot of work, or if they are pregnant or have a foal to feed.



Working donkeys may require supplementary feeds, either due to the increased energy requirement or a lack of time to consume sufficient forage. Supplementary feeding should focus on higher quality fibre sources such as grass hay, lucerne or grazing. Where concentrates are required they should be low in cereal grain content and molasses. Starch and sugar should be kept low, making up 15% or less of a donkey's total daily intake. If a donkey does need additional calories, it is best to supply these from forage sources. Examples include hay pellets or chopped hay (chaff).

There are three generally available types of straw: barley, oat and wheat.

- **Wheat straw** is the lowest in feed value and can tend to compact in the gut.
- **Barley straw** is higher in feed value than wheat straw, but lower than oat straw.
- **Oat straw** is highest in feed value and more palatable. Donkeys tend to eat more of it and gain weight.

Barley straw is preferred for healthy donkeys.

Lucerne is high in protein and energy levels and should only be fed to donkeys in very small amounts. Feeding maize or lucerne could cause digestive problems or laminitis,

## Realities

Most donkeys are fed on roughages for most of their life, supplemented with grazing of natural grassland, roadsides, bush and scrubland if they are kept in rural areas. Many working donkeys are found in urban and peri-urban areas where opportunities for grazing are few. Here owners may feed their animals on purchased feeds. The day's earnings will often dictate what quality of feed the donkey is given.





# Digestive system

## Start in the mouth



Checking the donkey's mouth should be an essential part of any routine veterinary examination carried out on donkeys. The ejection of partly chewed food from the mouth (quidding) is a sign of dental problems. Regular examinations by a trained vet or equine dental technician, to check and rasp the teeth of a donkey, can make an immeasurable long-term improvement to its life.

## The foregut is made up of the stomach and small intestine.

### The stomach

The capacity of the stomach for food is relatively small: about 8 - 9 liters in the adult donkey. Food usually passes out of the stomach 1 - 2 hours after feeding, but the stomach is rarely empty and food may remain there for up to three hours.

### The small intestine

Digestion of the non-fibrous part of the diet occurs along the length of the small intestine with absorption of the end-products of the digestion. The end-products of digestion are monosaccharides such as glucose, fructose and galactose from carbohydrates, amino-acids from protein digestion, and fatty acids from fat digestion. Water, vitamins and minerals are also absorbed in the small intestine.

## The hindgut or large intestine consists of the caecum and colon.

### Hind gut fermentation

Hindgut fermentation allows animals to consume small amounts of low-quality forage all day long and extract more nutrition out of small quantities of feed. Donkeys, like horses, are hindgut fermenters, but have only 50-75% of the energy requirements compared to ponies of similar size and weight.

Enzymes produced by microbes in the digestive system break down food to produce end-products which are a source of nutrients to the animal. This symbiotic relationship benefits both the host and the micro-organisms.

The donkey has a tough digestive system in which roughage (cellulose) is efficiently broken down by hind gut fermentation: microbial action in the caecum and large intestine.

When donkeys are seen on land where grazing and plants have been demolished, they are often wrongly blamed for denuding the land. This damage was more likely caused by other animals such as cattle and goats. The donkey is the only species that is able to survive on the depleted growth and is then wrongly blamed for the damage.



Working donkeys in hot climates may benefit from the provision of salt in the form of a salt block which should be provided separately from any food.

## Be aware

- It is very important not to change a diet too quickly. It can take up to two weeks for the micro-organisms in the hind gut to adapt to a change in diet. Sudden changes in diet can result in colic, diarrhoea or laminitis. A common cause of problems in some countries is the start of the wet season when new grass suddenly becomes available and people switch their donkeys from a diet of crop residues, to a grazing regimen.
- Donkeys may 'sham eat' for considerable periods of time; the animal appears to mouth and swallow food or may simply nudge it but take in nothing. Such behaviour is often a sign of a serious illness and should be investigated promptly. Hyperlipaemia must always be considered

## Water

Water is a crucial component of any donkey's diet. Donkeys are adapted to cope with thirst and rapid rehydration, but plenty of fresh, clean water should always be available. They tend to prefer warmer water rather than chilled water.

## Practical constraints

Always be aware of practical factors that may influence feeding regimes.

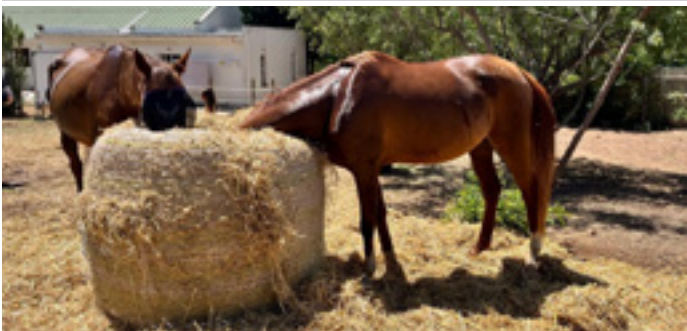




Bagged feed is easier to store



Bales are bulky but preferred as roughage

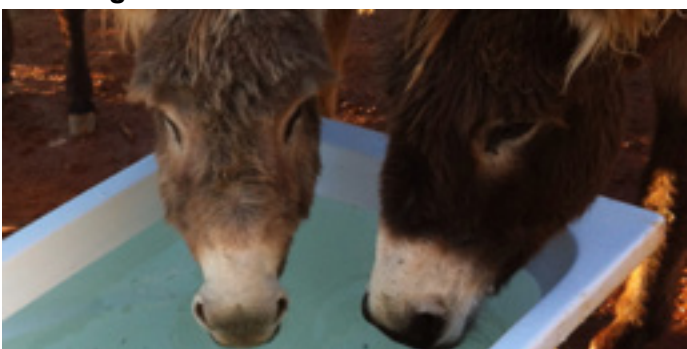


Round bales: difficult to handle and too big for donkeys

Establishments such as municipal pounds may experience difficulty in sourcing and storing dry baled feed as the supply is seasonal and the bales take up a relatively large space. The establishment may resort to commercially produced feed in bags, readily available year-round. To simplify operational matters, the type of feed purchased is the one deemed to be suitable for most of the species cared for. Often lucerne in pellet form is chosen. All the animals are then fed twice a day by decanting a bag or two of lucerne pellets into a large drum acting as a manger. The animals compete for the food.

A number of factors in this arrangement are detrimental to donkeys: the lucerne pellets are high in protein, low in fibre, and quickly ingested in two large feeds per day. Bullying, obesity, and laminitis may result.

## Challenges



Working donkeys are often likely to have an inadequate water supply, inappropriate feeding practices, and poor parasite control strategies, all of which increase the risk of colic.



An additional risk factor arises when donkeys roam on rubbish dumps (perhaps while their carts are loaded or unloaded there) and ingest plastic.

### Important factors

- Provide fresh water
- Provide constant trickle feed fibre
- Provide adequate exercise if the donkey is kept in a contained space
- Implement any changes in diet or management gradually
- Apply strategic parasite control
- Cattle rations should not be fed to donkeys unless the contents are known to be free of urea which carries the risk of ammonia poisoning.

## Body Condition Score and weight assessment

Detailed information for assessing Body Condition Score and a donkey's weight based on height and heart-girth measurement, can be found at <https://www.donkeysanctuarycyprus.org/sites/cyprus/files/page/60-1441279133.pdf>



It is not sufficient to simply look at a donkey to assess condition. It is essential to feel the neck, ribs, shoulder, rump, etc. Muscle feels firm, and fat feels more sponge-like.

Donkeys frequently develop a fatty crest which may fall over to one side of the neck. Once formed, these deposits rarely disappear, even with dieting, and should be ignored in a mature animal that is in otherwise good condition. Fat pads are common on the buttocks and the dorsal and lateral thorax. When such fat pads are longstanding they may become calcified and therefore extremely hard. They will never be lost through dieting and should be ignored when condition scoring.

It is almost easier to correct the body condition of an underweight donkey than an obese donkey. The latter takes years to reach that condition and it takes years to return the animal to a healthy body condition – if at all possible.

<https://www.ivis.org/library/veterinary-care-of-donkeys/nutrition-and-feeding-of-donkeys-0>







**We hope you found this manual useful. Please let us know how and where you have referred to it.**

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YouTube: <https://www.youtube.com/channel/UCRseHdhyztM6nOLSThI--hw>



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Google maps: Search "Eseljtjiesrus Donkey Sanctuary"



**Donkiehemel – a song for all donkeys.**



Watch this music video on our YouTube channel or search "Donkiehemel" in YouTube.

This song was composed and performed for Eseljtjiesrus by our patron, David Kramer.

It poignantly depicts the plight of working donkeys and the refuge offered by Eseljtjiesrus.

It is an ideal audio-visual aid to present our work.



**Acknowledgements**

**Our sincere thanks to all who have shared their knowledge and experiences of working with these humble animals.**

**We especially acknowledge all donkeys for their patience, humility and inspiration.**





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# Resources:

[www.donkeysanctuary.co.za](http://www.donkeysanctuary.co.za)



[www.donkeysforafrica.org](http://www.donkeysforafrica.org)



[www.thedonkeysanctuary.org.uk](http://www.thedonkeysanctuary.org.uk)



[Download this document at www.donkeysforafrica.org/resources/Donkey-Behaviour-and-Husbandry.pdf](http://www.donkeysforafrica.org/resources/Donkey-Behaviour-and-Husbandry.pdf)



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# DONKEY BEHAVIOUR AND HUSBANDRY

A GUIDE FOR ANIMAL WELFARE PROFESSIONALS, OWNERS AND CARERS



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