

CHAPTER 1. SELECTION AND CARE

1.4 CARE OF DONKEYS

1.4.2 FEEDING DONKEYS

GENERAL

Donkeys need several important feed components - energy, protein, vitamins, minerals and water. Different feeds contain these components in different amounts. Normally donkeys seek out a variety of grasses and other plants as they graze, in order to obtain all the components they need to remain healthy. Provided natural pasture is abundant and donkeys have adequate time to graze, the feeding of donkeys should not be a major problem.

GRAZING

As donkeys are selective feeders, they need to have a wide variety of plants to choose from when grazing. Donkeys can be fenced, staked, herded or left to graze unsupervised. If they are herded or allowed to range freely, they will be able to seek out a range of plants. If donkeys are staked, it is important to move their stake daily, or even twice daily, to a wide range of staking positions. If they are fenced, it is better to have several small paddocks rather than one large one. This allows donkeys to be moved often - a tactic called rotational grazing. In this way donkeys gain more nutrients than if they continually and selectively graze one large pasture. Donkeys should not be allowed to graze in areas with lots of manure - this can increase the problem of internal parasites, particularly worms. Move the donkey or move the manure!

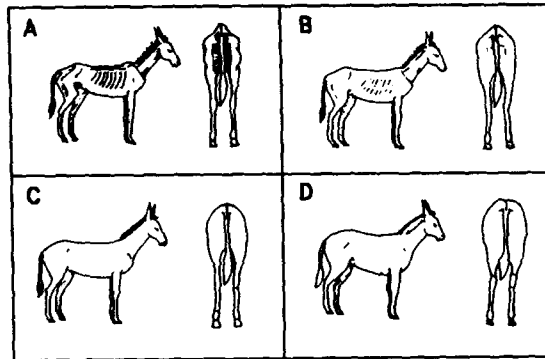
WATER

Donkeys need clean fresh water every day, especially when working in hot weather. Lack of water can cause colic, a fatal condition. If possible, donkeys should have access to fresh water in a trough or bucket all the time, or at least in the morning and evening. Troughs should be kept clean. Donkeys should be allowed to drink as much as they need, without being rushed. Donkeys are often expected to water themselves from nearby ponds or streams. This is convenient, as long as they are not exposed to heavily-used, damp, muddy areas as these may favour the spread of parasites.

SUPPLEMENTS

Donkeys may not be able to find all they need from grazing. They may need extra feed (supplements) provided by the farmer. A properly fed animal will live longer, work harder and resist diseases better. If they are well-fed, pregnant and nursing, jennies will produce bigger and healthier foals, and become pregnant sooner. Foals given extra food at weaning will grow faster, survive disease better and end up larger. Supplements are most important when:

- Local grazing is poor because of drought or large numbers of animals.
- There is insufficient food nearby, and donkeys would have to walk long distances to find food.
- Donkeys are regularly worked hard and long - work requires more energy and long work hours mean that donkeys may not have the minimum of six grazing hours needed each day.
- Female donkeys are in the last three months of pregnancy or they are nursing a foal.
- Young foals are growing, especially between 6 and 18 months of age.



- A). *Much too thin. It may die if not fed supplements*
 B). *Thin. This donkey needs supplementary feeding.*
 C). *Good condition. It only needs supplements if the work is long and hard, or if it is nursing.*
 D). *A fat donkey. Do not feed it more supplements.*
- Fig. 1 Body condition of donkeys. Source: after Werner, 1992*

The best way to know if donkeys need supplements is by regularly observing their body condition (Fig. 1). A donkey is too thin if its ribs or the backbone are very obvious, the neck is thin on top, the rump is pointed or the hip bones are sticking up like those of a cow. Adult male donkeys that are working may require extra energy, and perhaps additional salt. Animals that are still growing, and females that are pregnant or nursing may need extra energy, but also extra protein and important minerals (eg, calcium and phosphorus).

FEED TYPES AND QUALITY

Donkey feeds are of two main types: forage (or roughage) and concentrates. In general, forage consists of the leaves and stalks of a plant (grass, maize stover, etc). All donkeys need to eat forage every day. The quality of forage (how much energy and protein it supplies the donkey in each mouthful) is very dependent on the type of plant, the season of the year, the weather and how old the plant is when harvested or grazed. Young plants, as well as those growing in cooler, drier seasons provide more nutrients than do older plants. The quality of conserved forages (such as dried grass and groundnut hay) depends both on the quality of the original product, and the way it has been stored. Forages that become wet and mouldy or dusty can be

very unhealthy. If the available forage is not of sufficient quantity or quality to keep donkeys in suitable body condition, they may need to be given some concentrates as well.

Concentrates are generally seed grains and milling by-products. Concentrates contain more energy, and often more protein and minerals, than do forages. They are generally more valuable and expensive.

HOW MUCH TO FEED

The amount of extra feed that donkeys need to be given depends on many things. These include the animal's size, the amount of work done (how fast, how hard and how long an animal has to work), the quantity and quality of pasture available and the type and quality of feed used for supplementation.

To give an idea, a nursing donkey needs about 2.5 - 3% of its body weight a day if she only has forage. A working donkey needs about 3 - 4% of its body weight a day. A way of estimating the weight of a donkey is given in **Module 1.2.2**. Thus an average donkey will need about 4 to 6 kg of fodder a day if nursing or working. A jenny that is both nursing and working will need more. If the donkey cannot obtain this amount from available grazing, it will need supplements. In any case, if donkeys are fed 0.5 kg concentrate each working day, they will require less grazing, and will learn that work brings rewards.

FEED RESOURCES

The most common forage supplements are crop residues. These include groundnut hay (good and popular) and maize and sorghum stover. These can be collected from fields using the donkeys themselves with pack saddles or carts. They should be stored in a dry place. The leaves of legume fodder trees (eg, *Leucaena*, *Sesbania* and some *Acacias*) are rich in protein and can also be fed. Other sources of fodder include sugar cane bagasse and even shredded paper (if it does not have too much ink).

The choice of concentrate feed will depend on local availability and costs. Good (but expensive) concentrate feeds include milled grains such as maize, sorghum and millet. Soiled grains considered unsatisfactory for human use can be used, provided they are not mouldy. Cotton seeds, cottonseed cake, groundnuts, and groundnut cake are all good. Dried cassava root can be used, as can green bananas. If they are available, brewers grains or citrus pulp can be fed. Donkeys like molasses, which provides energy and can be poured on top of bran or forage.

Many grain by-products are cheaper and can be quite satisfactory. Maize bran from traditional pounding is very good (but it should not be left to go mouldy). Rice bran and wheat bran can also be fed, but should not form the entire diet, particularly of young animals. Brans are less nutritious than grains, and so more needs to be fed - perhaps 1 to 2 kg per day. Finely-ground brans may need to be mixed with a little water, to prevent choking. In some countries commercially-made concentrates are sold for cattle. If these contain special additives (antibiotics or chemicals such as *Monensin* or *Rumensin*) they should **not** be fed to donkeys.

MINERALS

All donkeys need salt. Rock salt is widely available and small quantities (about three teaspoons daily) can be fed on the palm of the hand or mixed with feed. Commercial salt lick blocks or mineral licks can also be provided in the pens of donkeys. Unless they are fed grain concentrates, donkeys will often need calcium and phosphorus. These are needed for growth and reproduction and they may be lacking in local forage. Cattle mineral licks contain these minerals (but avoid cattle licks that have more than 5 ppm of iodine, as these can be dangerous to foals). If licks are not available, try to ensure donkeys have some feeds rich in calcium (legume fodder leaves, groundnut hay, molasses) and phosphorus (wheat bran, bone meal). Calcium can be supplied from crushed limestone (one teaspoon a day mixed with the salt). Bonemeal can be made locally by boiling and crushing bones.

MANAGEMENT AND FEEDING

In general, feeding strategies should be aimed at maintaining adequate body condition during periods of work stress or reproductive stress (late pregnancy and nursing). Some preserved forage or concentrates should be maintained for such periods. This is particularly important if donkeys have to work at the end of the dry season, when natural pasture is scarce.

Do not feed male donkeys concentrates on days in which they are not working, unless they are very thin. On the other hand, mothers and foals may need to be fed concentrates every day. Feed one half in the morning and the other half in the evening. Donkeys have stomachs designed for frequent small meals (such as when grazing naturally) so the more often they are fed the better. It is not a good idea to feed a lot of forage in the morning before work. Give small amounts then, and during rest periods in the day, but feed most supplementary forages in the afternoon and evening, allowing donkeys to feed during the night. If a donkey is fed well, but is still thin, it probably has internal parasites which need treating (see **Module 1.4.4**).