

CHAPTER 1 SELECTION AND CARE

1.2 SELECTION CRITERIA FOR DRAUGHT ANIMALS

1.2.2 SELECTION OF DONKEYS FOR WORK

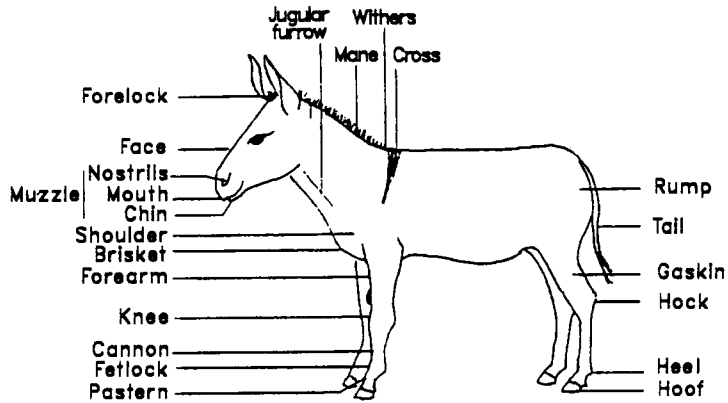
GENERAL

Donkeys can be used for transport (carting and/or packing), primary tillage and secondary cultivation. Primary tillage is often carried out using two or more animals hitched in a team. In Botswana sometimes up to 8-10 donkeys may be hitched together for ploughing. Donkeys may pull carts singly (very common in West Africa) or in pairs or larger teams (more common in eastern and southern Africa). The donkey is a good animal for packing as it is sure-footed and can easily negotiate narrow paths over steep and rocky terrain. Some of the advantages and disadvantages of donkeys are provided in Table 1.

ADVANTAGES	DISADVANTAGES
Friendly towards humans	Suffer from being alone
Willing to work	Friends not easily separated
Can turn in a small space	Need shelter from cold and damp
Easy to train	Meat not generally eaten
Need little supervision in work	Mature slowly
Can utilize poor food well	Comparatively small in size
Not affected much by external parasites	Breed slowly
Need little water	Manure more fibrous than nutritious
Can survive tsetse areas	
Comparatively cheap to buy	
Strong relative to size	
Live and work more years in good care than other animals	
Milk good for humans, specially babies	

Table 1 Some advantages and disadvantages of using donkeys
(Source: After Jones, 1991)

Both males (intact males are called jacks and castrated males are geldings) and females (jennies) can be used for work. Donkeys reach maturity around 4 years of age, with maximum weights being reached at about 6 years of age. In Africa, donkeys generally weigh about 120-160 kg. Naturally good management (that is feeding, care, health) affects the speed of growth and final body characteristics. With good care, a donkey can have a working life of 12-15 years, and they can live even longer. Castration will help to improve the temperament and reliability of males. However, good jacks are important for breeding, and farmers may be able to obtain fees for allowing their jack to breed with another jenny (or with a mare to get a mule).

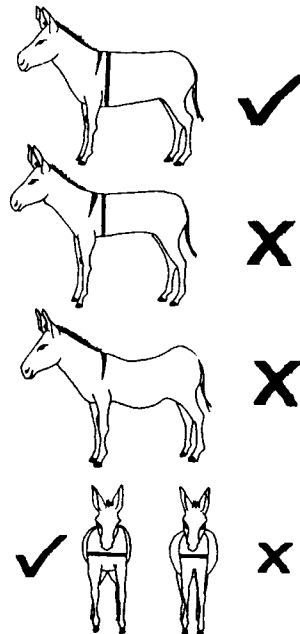


*Fig. 1 Names of the parts of a donkey.
Source: after Jones, 1991*

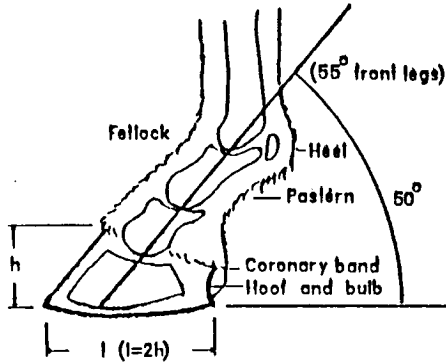
**DESIRABLE SELECTION
CHARACTERISTICS**

When selecting an animal for work certain physical characteristics should be observed. These include: a large frame with wide shoulders and a deep chest, a straight back (a slight sag just behind the withers or in front of the crupper in young animals is acceptable) and well-muscled straight legs which are relatively perpendicular to the ground (Fig 2). In young animals large knees are an indication of future thickness.

The donkey should have good eyesight and agility and an attractive hair coat, without skin diseases or an abundance of ticks. It is important to observe an animal while it is working to detect whether it has a physical disability, such as



*Fig. 2 Desirable and undesirable conformation features in donkeys.
Source: after Poitrineau, 1988*



coughing, poor respiration, lameness, sores or cuts.

Donkeys should have concave feet with a suitable angle between the pastern and the ground: this should be about 50-60 degrees, being slightly steeper in the rear legs. The hoof angle and the pastern angle should be similar. Animals with feet abnormalities should not be selected (Fig. 3).

Fig. 3 Foot of a donkey showing a suitable angle. Source: after Hutchins & Hutchins, 1981

In addition to sound physical characteristics, an animal should have a suitable temperament. It should be responsive, but not excitable or aggressive. However, the extent to which an animal develops into a good working animal will also depend on its relationship with its handler. An animal with good physical characteristics and a good temperament will not perform well if its handler is cruel or inconsistent.

ESTIMATING AGE

A donkey's age can be estimated by examining its incisor teeth. At about 2.5 years, the permanent central incisors erupt, followed by the permanent lateral incisors after 3 years and the permanent corner incisors after 4 years. As the animal becomes older its incisors demonstrate different "wearing patterns". The more worn an animal's teeth, the older it is (Fig. 4).

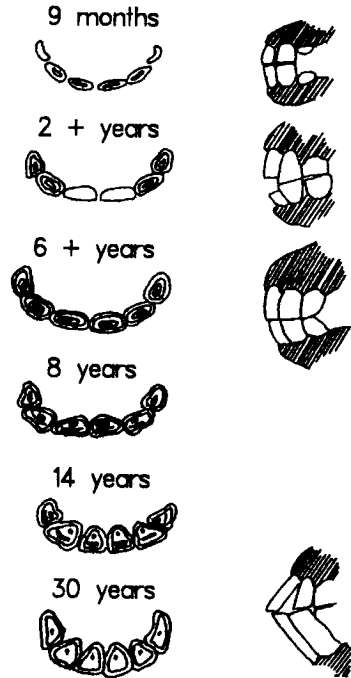
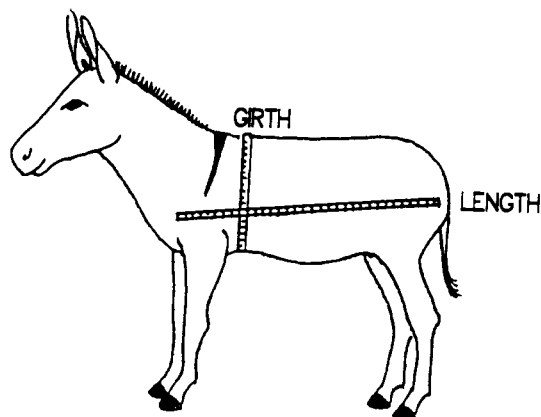


Fig. 4 Teeth of a donkey at different ages, viewed from the top (left) and from the side (right).

Source: after Jones, 1991

ESTIMATING WEIGHT

It is sometimes useful to know the weight of an animal, for example to estimate its likely draught force output, feed requirements or quantity of drug to administer. If facilities are available, animals can be weighed on a weighbridge or scale, preferably in the early morning before they feed and drink. In most places this is not possible, but some people well-used to donkeys can give quite accurate estimates.



*Fig. 5 Measurements that can be used for estimating the weight of donkeys.
Source: after Jones, 1991*

A simple, more objective method is to use a tape to measure the animals chest (heart girth) and some other body measurements (Fig. 5). This can then be converted into a weight equivalent, using a tested formula obtained for animals of similar breed, sex and age groups in that particular country. Such a formula only provides a general indication of how heavy the animal is. It is not as accurate as weighing the animal.

One estimate of donkey weight, based on measurements of Sudanese donkeys is:

For donkeys of 45-90 cm girth: $Donkey\ weight\ (kg) = 1.40 \times girth\ (cm) - 63$

For donkeys of 91-130 cm girth: $Donkey\ weight\ (kg) = 2.75 \times girth\ (cm) - 175$

An estimate used in Zimbabwe is:

$$Donkey\ weight\ (kg) = \frac{girth\ (cm) \times girth\ (cm) \times length\ (cm)}{10,800} + 23$$