

The Intelligent Choice
Indigenous, Polled, Profit

Climate smart animal agriculture in Southern Africa



The role of the Tuli and other indigenous cattle breeds in sustainable veld and livestock systems

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Die Intelligente Keuse
Inheems, Poena, Profyt

A large part of Southern Africa is only really suitable for some form of animal production off natural vegetation that varies in quality and quantity.

Climatic factors such as temperature and humidity also make the region an ideal breeding ground for a range of animal diseases and parasites, and this is being aggravated by gradual climatic and vegetation changes that include rising temperatures, less rainfall and a move from a grassland to a savannah / woodland biome in many areas.

Fortunately, Southern Africa still has a number of breeds and species that are capable of producing under these

conditions. In fact, the most successful and sustainable extensive farming systems in the region include those that use indigenous and locally developed breeds.

This includes cattle breeds such as the Mashona, Nguni and Tuli, the Damara sheep and the SA Boer goat, as well as hardy composites such as the Bonsmara and the Dorper sheep.

Farming with adapted breeds in sustainable systems is effectively climate smart animal agriculture.

The importance of fertility

Irrespective of the breed and species, fertility is the most important factor in

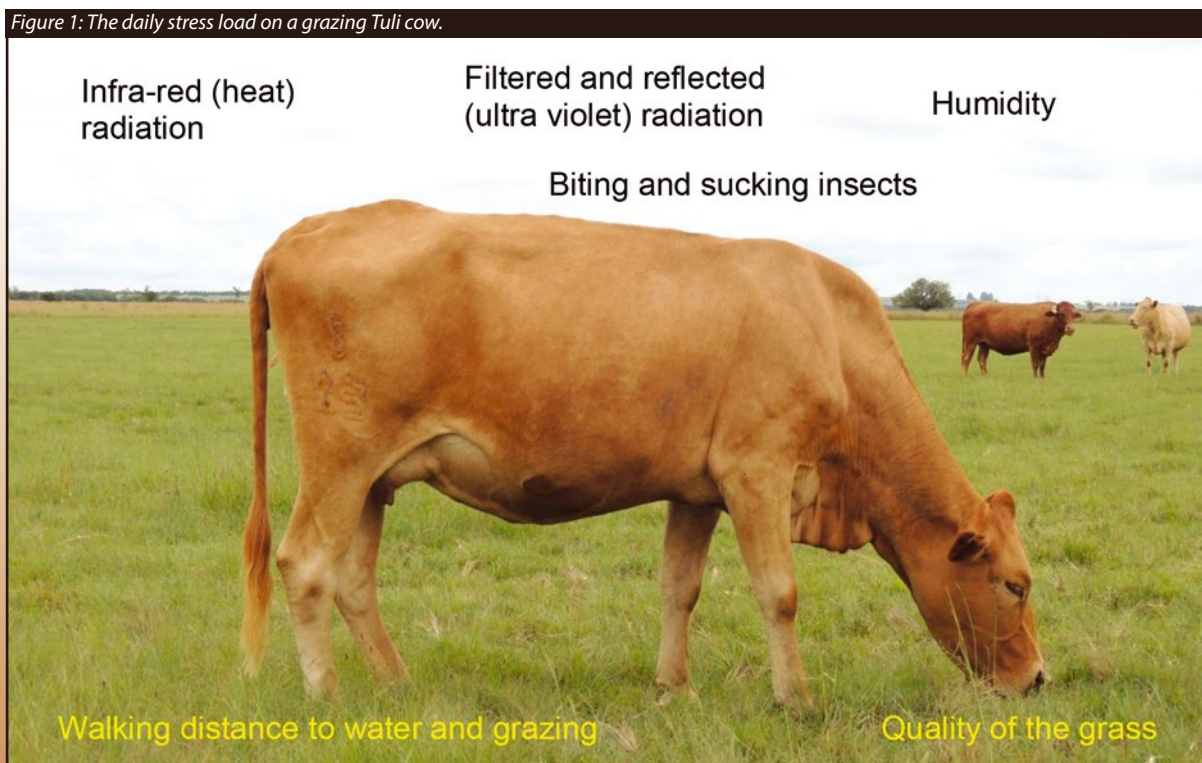
any sustainable and economically efficient livestock farming system. Any factor with a potential negative impact on fertility should be seen as a stressor and must be managed.

The more adapted the animal is, the less stressed it will be and it will use its energy and body resources to eat and reproduce.

Understanding the dynamics of adaptation

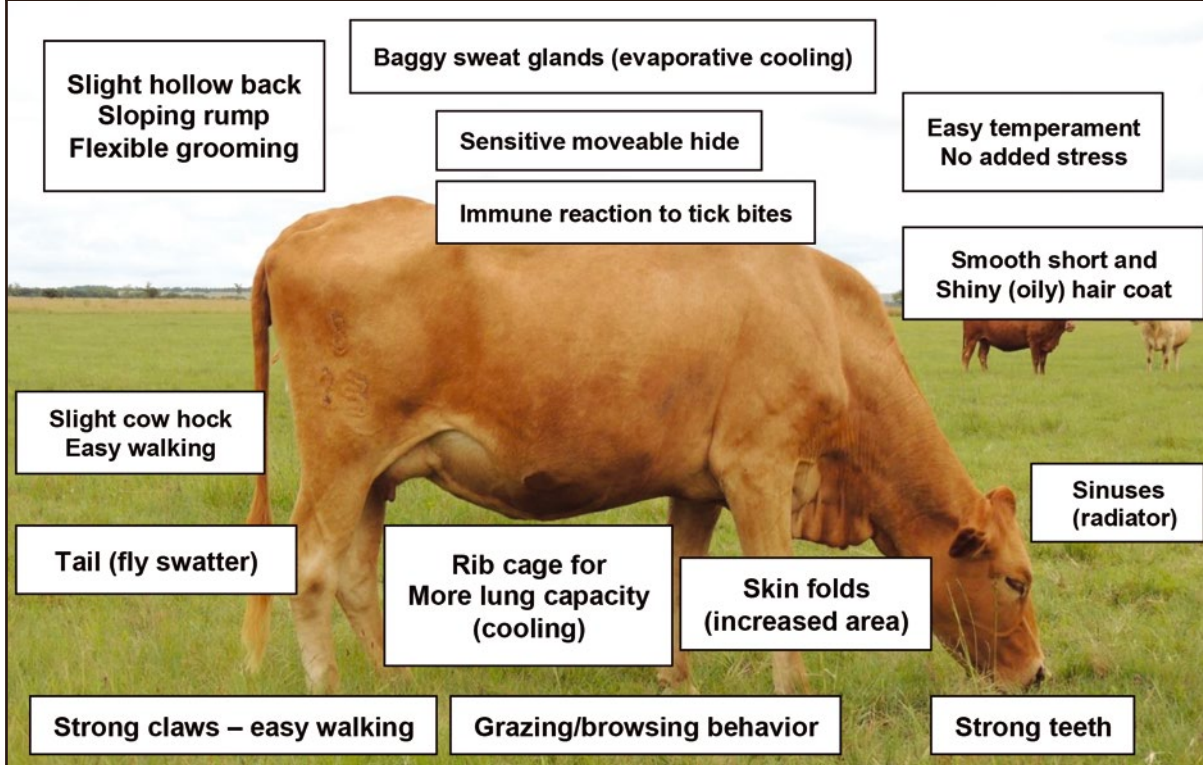
The dynamics of adaptability are best illustrated by the following diagrams. *Figure 1* shows the daily stress load on a grazing Tuli cow and *Figure 2* lists the traits that are used to offset this to enable the animal to focus on eating and breeding.

Figure 1: The daily stress load on a grazing Tuli cow.



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Figure 2: Functional traits used to offset the stress load.



Capitalising on the adaptive traits of the Tuli

The characteristic traits of the Tuli along with the added advantage of “natural dehorning” make it a very versatile breed that can be used for commercial beef production as a pure breed, as a dam line for terminal crossing with breeds such as the Sussex and Angus and as a terminal sire line for crossing with Zebus and small framed Sanga breeds.

It can also be and is being used to develop hardy fertile composites as well as the development of unrelated lines in breeds such as the Senepol. The traits and potential farming systems are summed up in Table 1.

Table 1: Characteristic traits of Tuli cattle and climate smart farming systems where the breed can be and is being used.

Traits	Farming systems
Early maturing	Stud and commercial beef production
Medium sized	Dam line for terminal crossbreeding
Excellent beef conformation	Sire line for terminal crossing with Zebu and small-framed Sanga
Quality beef	
Adapted to hot and humid climates	Development of adapted composite breeds (Tulim – Murray Grey x Tuli)
High fertility	
Docile temperament	Establishment of new lines for breeds such as the Senepol
Easy calving	
Natural poll	

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