

Mashona Cattle

History of the breed

The Mashona cattle are Sanga types with similar production characteristics to the Tuli / Tswana.

The Mashona breed is the most numerous in eastern and central Zimbabwe, a highland area in which pasture quality, particularly in winter, is lower than the surrounding lowlands. Following the pandemics of rinderpest and east coast fever which decimated cattle populations at the end of the nineteenth century, Mashonaland a province of Zimbabwe, was restocked with female cattle from Zambia, Barotseland and Malawi. The predominant type was the Angoni, a small-humped zebu breed which had some resistance to rinderpest.

These cows were subsequently mated to Mashona bulls. Thus the indigenous Sanga cattle of southern Africa not only share a common origin, but have at times received infusions from neighbouring populations.

The interaction between the animals and its total environment is of crucial importance in relation to its ability to perform and thrive in that environment. The Mashona, in common with other *Bos indicus* breeds has evolved both anatomical and physiological adaptations in order to cope with the Central Africa environment.

Characteristics / Attributes / Features of the breed.

The Mashona is nuggetty, efficient and highly mobile. They are recognised for their ability to forage in a wide range of environments and for their high fertility and early maturity. In cross-breeding trials in Zimbabwe, the Mashona has produced the highest proportion of beef per unit mass of any breed or cross-breed in semi-arid conditions.

Colour : The Mashona is commonly a solid colour (red to black) but there are varying degrees of black, red and brown brindle. Broken colours also occur.

Coat and Skin (Heat Loss) : The Mashona possesses certain adaptations which facilitate loss of heat from the body, therefore rendering it less susceptible to heat stress under conditions of high ambient temperatures. In comparison with *Bos Taurus* breeds, the coat is smooth and glossy, thereby reducing insulation and the skin is relatively thick and movable and possesses numerous sweat glands and high vascularity allowing for rapid heat dissipation.

Heat loss is also enhanced by the large surface area per unit mass, with the skin surface area often being increased by extra folds in the region of the dewlap, neck and scrotum. A further advantage is that fat tends to be deposited intramuscularly rather than subcutaneous, and this reduces any effects of tissue insulation. Moreover Mashonas have a relatively low metabolic rate and thus, under conditions of heat stress, there is less metabolic heat to be dissipated.

A natural hazard of cattle in Zimbabwe is the high degree of ultra violet radiation which occurs. The Mashona possesses a pigmented hide and secretes quantities of a substance called sebum from the skin which spreads over the hair and acts as an ultraviolet filter. It is thus well equipped to resist the damaging effect of ultraviolet radiation.

These include the formation of cancers and hyperkeratosis of the hide, and cancer of the eyelid which can become a major problem in certain breeds. Bad inflammation of the skin due to photosensitivity can also become a problem in cattle with un-pigmented hides.

A major advantage of the Mashona is it is relatively tick repellent this is due to the thick movable hide, combined with well developed panniculus muscles and a sensitive pilomotor nervous system. The hide will thus react more rapidly in the face of the slightest irritation, which is in marked contrast to breeds with longer woolly hair and thin hides.

These traits make the Mashona not only resistant to physical tick damage but also reduces their susceptibility to infection with tick born diseases. The same mechanisms that help repel ticks are also helpful in overcoming attacks from flies and other biting insects. The secretion of sebum is further believed to act as a form of fly repellent.

Size : As the Mashona is adapted to the leached masonland sourveld with acid soils, both skeletal development and body size are small. As a consequence, maintenance requirements of cows are lower and combined with a low metabolic rate, the chances of production and survival under adverse nutritional circumstances are better than for larger breeds.

Feed Preferences : There is no evidence that the Mashona possesses any special mechanisms for the digestion or utilisation of low quality diets. However, the combination of their small body size and mobility, and their ability to forage under conditions of high ambient temperatures and radiation, and their durable teeth, make them very efficient and selective grazing animals, particularly when compared with the larger Bos Taurus breeds.

Moreover the Mashona does show a natural propensity to browse, thereby making wider use of food resources. Many of the highveld tree species bear copious quantities of fruit and pods of high nutritive value. Fleshy fallen leaves from deciduous species have been shown to have crude protein content in excess of 10%. These natural supplements are readily sorted after and play a significant nutritional role in late autumn and early winter.

Feeding Habits : Practical observations indicate that Mashona cows exhibit a high degree of urgency in their grazing and browsing behaviours and appear to get their fill and start ruminating early in the morning. This may well be due to adaptation to long hours of "kraaling" (penning of animals each night to avoid loss from predators etc), to which they were traditionally subjected. Also their very deliberate identification and selection of grass and browse species (apparently by smell), definitely varies with the seasonal patterns and may be influenced by a natural instinct to achieve a nutritional balance, particularly of protein.

Temperament : The Mashona is a docile animal and, in contrast to some other Bos indicus breeds, both bulls and cows adapt well to handling . the relatively small body size further facilitates handling and management.

Mothering : Under ranching conditions, the herd and maternal instincts are well developed. As a consequence, females tend to graze in groups and this allows for more efficient use of bulls during the breeding season. At calving time, a few matrons will guard the calves in a nursery area while their dams are grazing and they serve to protect the calves and wan

the rest of the herd if danger threatens. The bulls take naturally to single sire herds and exhibit herd control to a remarkable degree in much the same manner as certain polygamous antelope like the impala.

The main attributes of the breed may be summarized as follows:-

- Resistance to high temperatures and heat stress
- Resistance to tick infestation
- Resistance to ultraviolet radiation
- Minimal damage from flies and biting insects
- Reduced susceptibility to tick borne diseases
- Small body size and low maintenance requirements which aids survival under adverse nutritional conditions
- High degree of mobility
- Efficient and selective grazers
- Propensity to browse
- Durable teeth

The Mashona in Australia

It should be noted that Mashona cattle are unknown outside Africa and all examples are derived from the cattle running in that region.