

NGUNI CATTLE A BREED OF NATIONAL IMPORTANCE

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The South African Department of Agriculture's Registrar for Animal Improvement recently linked the title of "Breed of National Importance" to the Nguni breed of cattle.

What this means for the breed, breeders and other role players in the industry is still an open-ended question. What is clear, though, is the role that this breed plays in the history and culture of the people of South and Southern Africa in their long and arduous voyage through Africa and their settlement in Southern Africa, some 2000 years ago.

The connotation of a breed of national importance carries a great deal of sentiment. However, the reality is a worldwide trend towards the replacement of indigenous livestock with commercial breeds, as reported by the United Nations Food and Agricultural Organisation (FAO) and the International Livestock Research Institute (ILRI). The loss of these indigenous breeds would mean the loss of genetic resources that help animals overcome disease and drought, particularly in the developing world. Ultimately, such genetic depletion would lead to losses in food resources the world over.

The question is whether these cultural sentiments and the warnings from the UN FAO and ILRI will flow through into our own Animal Improvement Act and its affect on breeders, the approach to genetic diversity and the economic driving forces behind our livestock industry. What is of significance, though, and which doesn't need any titles or regulatory support, is the role of indigenous livestock in our uncertain environmental and economic future.

The UN FAO reports that farmers are opting for exotic breeds over indigenous breeds for short-term benefits of higher yield of milk and meat. An over-reliance on just a few breeds of species is causing the loss of an average of one livestock breed every month. It is essential to promote bio-diversity among livestock breeds, especially since the industrialisation of the agricultural sector is threatening the valuable gene pool of animals and cultural variety. The rational choice ought to be to capitalise on the drought-tolerant and disease-resistant strains in indigenous breeds.

The fact of the matter is that these native species are better adapted to face extremes of climate in their specific regions, conditions with which exotic breeds will find it difficult to cope. Considering the unpredictable weather of the future and the likely challenges in the form of drought and disease, these exotic species might not be that hardy. The result is likely to be economic loss, which will offset the initial and perceived gains of improved yields.

Our current economy is based on cheap energy and a stable climate parameters which are about to change. We still have the denialists amongst us, but the quantity and frequency of recent weather records being broadcast almost daily is proof enough that it's not "weather as usual".

We are experiencing 100-year droughts and floods simultaneously, within the same geographic areas, with the associated financial loss and the emergence of unknown and thought-to-be-extinct diseases. Additionally, fuel and electricity prices are soaring and fossil fuels are being depleted.

A recent United Nations report appears to pin many of these dilemmas on the cattle industry, with the following statement summing up the report: "The meat industry is one of the most significant contributors to today's most serious environmental problems... [and]...urgent action is required to remedy the situation."

The report concludes that livestock are responsible for 18 percent of greenhouse gas emissions, a bigger share than that of the transport industry. Greenhouse gas emissions within the livestock industry arise from:

- Feed production (e.g. chemical fertilizer production, deforestation for pasture and feed crops),
- Cultivation of feed crops (e.g. feed transport and soil organic matter losses in pastures and feed crops),
- Animal production (e.g. enteric fermentation and methane and nitrous oxide emissions from manure), and
- The transportation of animal products.

Although the methodology has been challenged, it is clear that the investigation was aimed at concentrated animal feeding operations (feedlots) which are heavily reliant on fossil fuel energy and by-products in the production of fodder used in their systems.

The perspective is entirely different, though, in a grass-fed meat production system, which uses indigenous, adapted livestock on an intensive, rotational grazing system. Intensive grazing systems, which simulate the natural grazing patterns of the huge, wild herds of herbivores that once roamed the African veld, stimulate the soil quality and the various grasses to improve their yields.

An intensive, rotational grazing system increases the decaying organic material that feeds micro-organisms, restores subsoil health, creates water-absorbing voids, and ultimately increases the organic matter or carbon content of the soil. These are big pluses in a quest to restore depleted soil and fight climate change. Perennial crops pull both methane and carbon dioxide from the atmosphere and stash these safely in the soil, as opposed to the tilling of the soil for annual feed production that releases carbon dioxide. Such a system also eliminates the costs associated with fertilizers, pesticides, machinery and fuel usage, further reducing the carbon footprint associated with these inputs.

Any disturbance of the soil releases greenhouse gases and nowhere is it more profound than during floods where the natural grass cover has been disturbed, causing major losses of fertile topsoil and releasing these gases. The stimulation of natural grasses and perennial crops prevents the loss of valuable topsoil during floods and aids in the retention of water that would have been lost to runoff.

With an increase in nutritional grazing, which improves the nutrition achieved by the livestock through intensive, high-density grazing, the methane production associated with bovine digestion is reduced by as much as 45%. Conventional pastures contain high-fibre, low-quality forage, which produces more methane.

From a health point of view, grass-fed beef is good for our hearts and our waistline, because it is three times leaner than conventional grain-fed beef, and as a consequence has fewer calories, too. It has two to four times more essential omega-3 fatty acids and contains more beta carotene, vitamin E and folic acid. Researchers have found grass-fed beef contains two newly discovered “good” fats: conjugated linoleic acid (CLA) and trans-vaccenic acid (TVA). CLA shows great promise in lab studies, in helping to fight cancers and cardiovascular disease.

Grass-fed beef has no extra hormones or traces of antibiotics. The animals live a low-stress life, grazing outside on pasture, thereby presenting us with a more humane livestock system. Bovine Spongiform Encephalopathy (mad cow disease), has not been found in grass-finished animals. Grass-finished cattle are also less likely to be contaminated with acid-resistant forms of E. coli, a serious food-borne bacteria.

Some sources claim they can finish off animals in an optimum grass-fed operation on the same area of land required to produce crops to feed the same number of animals in a feedlot. The challenge is in finding suitable genetics in animals that can be grass fed and marketed off the veld. The industrial beef system has favored animals that perform well in converting grain into meat, and not ones that fatten well on grass. The key to the success of a system that produces animals in intensive, grass-fed conditions, then, is the selection of the appropriate genetics that could capitalise on such a grass-fed system. The preservation of indigenous and diverse livestock genetics, as recommended by the UN FAO and IRLI, is the crux.

Putting a label of significance on any breed, which elevates it above other breeds, places a substantial responsibility not just on the breed, but on its breeders and custodians alike. However, in light of our rapidly changing environment and the unique challenges that all species are facing in this turmoil, it is probably not out of place to single out the Nguni as a breed of cattle that has withstood the test of time.

Tried by nature and tested by circumstances, the Nguni stands proud in a line of survivalists that have built up the strength and reserves to face future challenges, not in a confrontational way, but in harmony with nature, its age-old companion.

References

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4. News From Mother: Why Grass Fed is Best; The Mother Earth News editors December 2006/January 2007
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The Multiple Benefits of Grass-fed Beef Production Systems

- More humane animal treatment
- More nutritious meat and dairy products
- Reduced flooding and soil erosion
- Increased groundwater recharge
- More sustainable manure management
- Less E. coli food poisoning
- More fertile soil and more nutritious forages
- More diverse and healthier ecosystems
- Reduced use of chemical fertilizers and pesticides to grow unsustainable fodder crops
- Reduction of Greenhouse gasses
- Reduced agricultural carbon footprint
- Less reliance on fossil fuels and associate products