

The buffalypso: the water buffalo of Trinidad and Tobago

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ABSTRACT: E.E. Mac Lachlan, M.R.C.V.S. in 1952 brought to the attention of the Trinidad Veterinarians that the Water Buffalo was an important animal for the Caribbean and the hot humid Tropics. In 1949 Dr Steve Bennett, DVM, Colorado, began with Mr. T. Hume Porteous the development of the Buffalypso breed for beef production in Trinidad at the Caroni Limited Sugar Company. The paper describes the development of the Buffalypso [Buffalo from Trinidad the land of the Calypso- **Buffa-lypso**] and highlights its traits.

INTRODUCTION - Mac Lachlan (1959) brought to the attention of the Caribbean Veterinary association the importance of the water buffalo in Trinidad [the larger island of the twin island colony of Trinidad and Tobago]. He highlighted the following:

- 1] The water buffaloes that were imported from India were believed to be of the *Bos* genus [but it was later realized that this was not so and it was given its own genus *Buballis*];
- 2] Buffaloes were widely used for work and ghee production;
- 3] In 1923 and 1949 the last Murrah buffaloes were imported into Trinidad from India;
- 4] The buffaloes thrived well on grass that was high in fibre and were well adapted to the hot humid tropical conditions in Trinidad and the Caribbean;
- 5] The buffalo milk contained 7-12 % butter fat and it took 12 pounds of buffalo milk to make 1 pound of butter as compared with 24 pounds of ordinary cows' milk;
- 6] Buffaloes have a marked preference for Asiatics and do not care much for Africans and Europeans though there are exceptions to this, Dr Steve Bennett and the Italian buffalo producers have disproved this;
- 7] They are much easier to break in than Zebu/Brahmin type cattle;

He concluded

“The adaptability of these animals to tropical conditions would indicate that, with selective breeding and improved environmental conditions, these animals may easily find their way in the tropics in the field of beef production and , to a lesser degree, as an auxillary to the diary industry”.

This was the foundation of the philosophy behind the breeding of the Buffalypso by Steve Bennett. He began this work with the Caroni Limited Sugar Company buffalo heard in 1949.

The early days of the buffalypso development

Steve Bennett graduated in Veterinary Medicine from Colorado State University in 1948 and began work with Caroni Limited in 1948. He and Mr. T. Hume Porteous [the manager of the buffaloes at Caroni Limited] developed the selection process of the buffaloes that were imported into Trinidad between 1905 and 1908 (Anon, 1974) and then later in 1923 and 1949 (Mac Lachlan, 1959). Dr L Shannon had earlier introduced the water buffalo onto the sugar plantations of Trinidad replacing the Zebu and the Brahaman [Nellhore type] cattle as work animals. The water buffaloes imported into Trinidad were the Murrah, Surti, Jaf-farbadi, Nelli and Bhadawari, the last being six Murrah bulls in 1948. Caroni Limited the sugar company that pioneered the development of the Buffalypso as a beef type animal saw this initiative as one of their efforts at diversifying out of sugar. Steve Bennett spearheaded the breeding programme that was designed achieve the following with the animal:

- 1] to straighten the topline of the animals'
- 2] to broaden the loin and rump of the buffalo to ensure that maximum meat was produced by the animal,
- 3] to transfer the meat from the front quarters (that was where the tractive strength and muscles were) to the hind quarters (that was where the larger muscles and high value meat was), and
- 4] to have horns with small tight curls (to prevent damage to other animals and the stockmen) and this was the Murrah influence.

In addition to the above selection criterion the animals were provided with good quality feed and improved living and husbandry conditions. In 1949 the Caroni Sugar Company owned water buffaloes that were zero-grazed using the deep litter system. This was done on earth floors and the animals were fed the forage (sugarcane thrash and grass) on the ground. In this way the refusals were compacted and mixed with the animal manure. Therefore at times the animals would be deep in the manure. This was done in order to collect periodically from the pens the organic manure, as back then this was a very important source of fertilizer for the sugarcane plantations. Because of this unsanitary condition the animals were first tested for TB in 1949 and 30% of the 500 animals reacted positive. The disease was eliminated when the husbandry was improved by having well drained pens with concrete floors. The pens were cleaned daily and the feed was put on racks and feed troughs. Creep feed was introduced to nursing calves and a strict tuberculin testing and slaughter programme was established. All the important characteristics of individual animals were recorded and then through the process of selection as stated above the uniquely Trinidad animal was developed. It was called the **Buffalypso** as it was a **buffalo** from the island of Trinidad that was famous for its **Calypso** music, hence the name **Buff-alyпсо**.

The selection work continued on the Caroni herd alone until 1973, and after this time selection was extended to other collaborating farms. Rastogi, Youssef and Gonzalez (1978) and Garcia, Neckles, Lallo and Bennett (1991) also reported on the historical development of the animal.

The Description of the Buffalypso

The Buffalypso has a refined head and prominent eyes. The horns are small and flat, compact growing backwards, upwards and inwards with slightly pointed tips. The animals come in three colours, black, brown and albinoid. They also have the meat well

distributed in the hind quarter. All bulls and cows with white muzzles and white hooves tended to produce the albinoid type animals and these animals were eliminated from the breeding programme.

Figure 1. The Head of a Buffalypso of Trinidad and Tobago.



In Trinidad Wendover (1968) reported an average daily gain (ADG) of 0.5 kg/day of animals grazing unimproved pastures with no shade between June 1967 to March 1968 (277 days) at a stocking rate of 2.5 animals/ha. Under feedlot conditions at the Sugarcane Feed Centre [SFC] from 1980 to 1988 the Buffalypso performed better than grade Holstein cattle (Garcia *et al*, 1991). The first feeding experiences with the Buffalypso at the SFC gave feed conversion efficiencies ranging from 7.31 to 10.04 kg dry matter intake (DMI)/ kg average daily gain (ADG) on sugarcane based diets. The later studies showed that under feedlot conditions the

Buffalypso bulls consistently outperformed the crossbred Holstein steers by almost 100% both in terms of ADG and FCE. However, the latter did better than the Buffalypso in terms of dressing percentage (DP). The DPs were 55 to 58% and 51 to 54% for the grade Holstein steers and Buffalypso respectively. The rib eye area (REA)s were 68 to 86 cm² and 65 to 89 cm² for the grade Holstein steers and Buffalypso respectively. The lower DP from the Buffalypso bulls may have resulted from the fact that the head, hide and hoof comprise a larger portion of the buffalo carcass as compared to *Bos* type cattle (Garcia *et al* 1991). At the Aripo Livestock Station in Trinidad Rastogi and Rastogi (2004) reported dressing percentages ranging from 46.89% to 52.43%. The DP of animals slaughtered from 14 to 20 months ranged from 48.05 to 51.24%.

Figure 2. Buffalypsoes of Trinidad and Tobago.



The average and weighted average estimated crude protein (CP) intakes for the Buffalypso bulls expressed as a percentage of the recommendations were 114.9 and 111.1% of the NRC (1978) respectively, and it was 132.3 and 125.8 % respectively for the NRC (1984). It was concluded that the ARC (1980) CP recommendations cannot be used for either buffaloes of beef cattle in the Tropics as the recommendations were too low. The performance of the Buffalypso in Trinidad indicates its usefulness as a beef producer. The diets used were high in ingredients from the Sugar Industry. The combined levels of molasses and fresh chopped sugarcane/sugarcane silage/sugarcane bagasse ranged from 73 to 87% of the total diet DM. The performance of the Buffalypso heifers under feedlot conditions were 0.7 kg/day between live weight ranges of 150 to 250 kg. Buffalypso heifer performances reported by Williams (1989) citing work done in Costa Rica was as follows: age at first calving was 24 to 36 months with a calving interval of 371 days. Work in Cuba with Buffalypsoes reported calving intervals of 387.7 to 405 days (Garcia *et al* 1991).

Buffalypso Meat

Wilson (1961) reported on the palatability of Buffalypso meat. The diners voted Buffalypso meat better than that of locally grown steers and imported frozen beef.

Buffalypso Milk

Rastogi and Rastogi (2004) reported the following to be the composition of Buffalypso milk at the Aripo Livestock Station: Fat 7.15%, Protein 4.03 %, Solids Non Fat 8.84%, Total Solids 16.97%, Calcium 0.23%, Ash 0.85% and Lactose 5.6%.

Reproductive Performance

Rastogi and Rastogi (2004) reported the following on the reproductive performance of the Buffalypso at Aripo Livestock Station in Trinidad. Heifers were exposed to the bulls at 350 kg body weight, and this was attained at 21 months, and 75% became pregnant. The average calving interval was 385 days from 56 cows. There were no observed abortions, with less than 1% still births. No dystocias were observed and all cows calved in the pasture. AI with the Buffalypso was successful and a calf was born, the scientists involved with this was Dr. Marlon Knights (Reproductive Physiologist of the Department of Food Production, UWI) and Dr. Nicole Lambie (Veterinarian of the Ministry of Agriculture, Lands and Marine Resources). There are plans for Embryo Transfer with the Buffalypso at the Animal Breeding Centre (ABC) [Aripo Livestock Station in Trinidad]. This was initiated by Dr. Gustave Borde, of the School of Veterinary Medicine, The University of the West Indies, Trinidad and Tobago. The University of Trinidad and Tobago (UTT) is in the process of attempting to conserve a small group of Buffalypsoes at the Sugarcane Feeds Centre in Longdenville, Trinidad, but this is still in the embryonic phase.

Health

Rastogi and Rastogi (2004) reported that the Buffalypso at Aripo Livestock Station were free from major infectious diseases of cattle including Foot and Mouth Disease, ecto and endo parasites inclusive of ticks and tick borne diseases.

The Future of the Bufalyпсо

Today in Trinidad there are less than 5000 buffaloes of which less than half would be of the Bufalyпсо type. In addition there is no present effort at ensuring the survival of this germplasm in Trinidad. But the Bufalyпсо has been exported to many countries (19 in all), including USA, Colombia, Cuba, Costa Rica, Guatemala, Honduras, Mexico (via Honduras), Nicaragua, Panama, Venezuela.

Steinfeld, Gerber, Wassenaar, Castel Rosales and de Hann (2006) have indicated that there is erosion of the Livestock biodiversity. They indicated further that today only 14 of the approximately 30 domesticated mammalian and bird species now provide 90% of human food supply from animals (citing Hoffmann and Scherf, 2006). Steinfeld *et al* (2006) have indicated that the arguments in favour of the management of livestock genetic resources are the same as for other types of biodiversity: to maintain use and non-use values to humans, to preserve important components of cultural heritage or typical landscapes, or to preserve traits that may be of value in the future. In this regard it will be important for the Bufalyпсо of Trinidad be preserved for this and future generations.

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