

Dagri Cattle: A Unique Germplasm of Gujarat

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Abstract: Gujarat is a rich state in terms of livestock biodiversity some of the well-known breeds of cattle and buffaloes are located here. Dagri cattle with its breeding tract in western hilly areas of Gujarat was 45th breed to be registered by NBAGR. Dagri cattle is predominantly white in colour but sometimes with grey shade & in some cases the rear legs are brownish. This cattle is extensively used as draught purpose animal for agricultural operations in hilly areas. The cattle breed with small body size and less feed requirement makes it more economically suitable for tribal farmers. It can survive in extreme heat conditions which proves her strength against survival in extreme hard weather conditions. Appropriate conservation strategies need to be devised to conserve this unique germ plasm of Gujarat state.

Introduction

The total livestock population of India was 528.69 million in 2007. This declined to 512 million in 2012 and again increased to 535.78 million in 2019. The total population of cattle in country is 192.49 Million during 2019(Anonymous,2019). There are 50 recognised cattle breeds of India (Anonymous,2020). Total cattle population is increased by 0.8% over previous livestock census of 2012. Female Cattle Population increased by 18.0% whereas male cattles decreased by 30.2% over previous census. About 36% of the total livestock is contributed by cattle. West Bengal have the highest cattle population of 19 Million in 2019(Anonymous,2020). Gujarat located on western most part of India is rich in cattle biodiversity and is proud owner of Gir, Kankrej, Dangi, Dagri breeds of cattle which has got recognition from NBAGR (National Bureau of Animal Genetic Resources). Gujrat state total cattle population in 2012 is 99,83,953 and in 2019 is

96,33,637 which is decreased by 3.51%(Anonymous,2019). The Dagri cattle breed with accession no. INDIA_CATTLE_0400_DAGRI_03046 was registered as 45th cattle breed of India and 4th cattle breed of Gujarat(Anonymous,2020).

General Information



Synonyms: Gujarat Malvi

Population:2,82,430

Breeding tract: Dahod, Narmada, Chhotaudepur & Mahisagar , Panchamahals & Narmada districts of Gujrat.

Utility: Draught purpose

Physical Characteristics

Dagri cattle is predominantly white in colour but sometimes with grey shade & in some cases the rear legs are brownish. Muzzle colour is black or sometimes grey in males and pink, grey and greyish white in female Dagri cattle (Patel *et al.*,2021). Horns are short, thin, curved upward in a lyre shaped or in straight fashion with pointed tip. Colour of hoof were found mostly black colour. Tail end hair colour of Dagri cattle were found black. Cylindrical shape of teat and mainly small

size milk vein(Bhinsara D.B. *et al.*,2023). This cattle is small sized animal with compact body and straight forehead. Body length is proportionally more than height.

Economical characteristics

Extensively used as draught purpose animal for agricultural operations in hilly areas. Milk yield is less, 1.5-3.0 kg/day and 75-650 kg/lactation which is mainly used for household consumption. Less feed requirement, survives mainly on grazing, hardly stall fed(Patel *et al.*,2021) Cow dung used for organic, natural farming & Agriculture farm manure. These cattles are resistant to tropical diseases as compared to exotic or crossbreds and adapted well to the extensive housing system(Bhinsara D.B. *et al.*,2023).

Table 1: Average Body Parameters (Patel *et al.*, 2021)

Parameters	Male	Female
Height (avg. cm.)	106.7	102.5
Body Length (avg. cm.)	115.5	110.8
Heart girth (avg. cm.)	134.4	128.9
Body weight (avg. kg.)	224.0	170.0
Birth weight (avg. kg.)	16.75	13.0

References

Anonymous, 20th Livestock Census. All India Report. Department of Animal Husbandry, Dairying and Fisheries, Ministry of Agriculture and Farmers Welfare, GoI, New Delhi; c2019.

Anonymous, National Bureau of Animal Genetic Resources, Karnal Haryana, India; c2020.

Patel, Dinesh D, Ashish C Patel, Dhaval F Chaudhari, Joshi RS, Rank DN. Phenotypic characterization of Dagri

Table 2: Overall Performance (Patel *et al.*,2021)

	Average	Minimum	Maximum
Litter size born	1.0		
Age at first parturition (months)	53.0	48.0	60.0
Parturition interval (months)	16.4	15.0	18.0
Milk yield per lactation (kg)	316.0	75.0	650.0
Milk Fat (%)	4.08	3.0	5.5

Conclusions

Though Dagri breed produce a lesser quantity of milk compared to other breeds, some farmers refrain from milking Dagri cows and allow the male calves to suckle completely. Dagri cow is disease resistance to disease like foot and mouth(Bhinsara D.B. *et al.*,2023). The Dagri cow's bullock is hard working. Bullocks of this breed are most suitable for farming in hilly terrains because of its smaller size, its feed requirement is less, making it more economical for tribal who have small farm holdings. It can be survived in extreme heat conditions which proved her strength against survival in extreme hard whether conditions.

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