



Management and physical features of tribal Kathani cattle of Vidarbha region in Maharashtra state

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ABSTRACT

Presently lesser known cattle breed in eastern part of Vidarbha region of Maharashtra state is documented in old gazetteer of Chandrapur district as Telangpatti. During study it was noticed that more popularly this cattle subpopulation is recognized as Kathani. A survey of 1476 animals of different age groups belonging to 389 tribal families from 3 districts Chandrapur, Gadchiroli and Gondia was under taken for studying morpho-metric characteristics along with management practices followed for their animals. Since this breed has not been included in the list of recognized cattle breeds of the country and considering their important role in livelihood of tribal community, an attempt was made to phenotypically characterize the subpopulation. Observations on socio-cultural importance, body measures and general management have been detailed based on the studies of sample. Further study on larger sample for breed characterization is recommended.

Key words: Kathani cattle, Maharashtra state, Morphometric traits, Vidharbh region

Gaolao is the only recognized breed of cattle from the state of Maharashtra and region of Vidarbha comprising districts of Buldhana, Akola, Amaravati, Washim, Yavatmal, Wardha, Nagpur, Bhandara, Chandrapur, Gondia and Gadchiroli. Large fraction of cattle population considered as non-descript could have a possibility of existence of a subpopulation with a possibility of new breed. Visit to paddy growing districts like Chandrapur, Gadchiroli, Wardha, Gondia etc. indicated existing cattle sub populations showing similarities in their physical appearance. The animals are of small body size and are suited for working in muddy paddy fields in the deep forests, females yield poor milk; majority of them are white in colour. Present investigation therefore was undertaken to study and document their phenotypic traits with a purpose to explore the possibility of new sub population. A survey of 1476 animals owned by 389 Tribal families spread over 12 villages in Chandrapur, Gadchiroli and Gondia districts and was carried out during the year 2010–2011 through a questionnaire developed by National Bureau of Animal Genetic Resources (NBAGR) for studying socio-economic status of animal holders and morpho-metric characteristics. The animals under study were grouped as G-1 calves (below 1 year age, 192), G-2 young stock (1–3 years,

348), G-3 adult females (287), G-4 bullocks (640) and G-5 breeding bulls (9).

Geographical distribution and native environment of the subpopulation: The geographical data indicated thriftiness of these animals in varied range of temperature and rainfall ranging from 45°C and 1308 mm (Gondia district) to 5°C and 1428 mm (Gadchiroli district) respectively. Having deep and thick forests in these districts (locally known as Zadipatti districts – an area of forests and trees), 72% area being under Southern Tropical Dry Deciduous Forests, including tree varieties like Sag, Halda, Tinsa, Shisham, Mahua, bamboo and teak and soil derived from Deccan Trap is Regur or black cotton containing high alumina and carbonate of calcium and magnesium with variable amount of potash, low nitrogen and phosphorus. The soil is generally porous and swells considerably on addition of water and dry up with cracks on losing the moisture. The rocks of the Archaean age on weathering give rise to Red soil which is most common in the area, where those rocks are present. Major rivers are Wainganga, Wardha, Gadghvi and Kathani flowing through these districts. The cereal crops like rice, sorghum, wheat, maize and kodo (millets) are cultivated and used as staple food cash crops like cotton and soya bean are also found cultivated.

Socio-economic status and general management practices: Majority of animals keepers were Gond tribals, other communities like Kunbi and Teli were also noticed

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Fig. 1. Kathani bullock.



Fig. 2. Kathani cow.

keeping these animals having average family size was found to be 4.87 ± 0.16 . Majority (87.91%) of the respondents were engaged in agriculture, followed by labour (6.94%), 5.14% engaged in other occupations like wan-majuri (working in forest area) and 3.59% engaged in sale/purchase trading. The animal trading was found done through weekly market (63.75%) and animal fairs (36.25%). Nearly two third (65.55%) animal holders were found keeping animals for agriculture purposes, 26.48% for dual purpose (milk and draught), 6.68% for milk purpose especially for home consumption while 1.29% respondents reared these animals either race or breeding purpose. 75.34% animals were offered fodder after grazing of which maximum fraction was from Gondia district (42.36%), followed by Chandrapur (31.03%) and Gadchiroli district (26.62%) remaining fraction of animals (24.66%) were not offered any additional fodder. Bullocks were found paid special attention because they were considered as main support for agriculture practices and they were fed on working days with concentrate by mixing rice husk with Mahua flower. The concentrates generally included cooked rice floor, rice husk etc. It was also observed that all respondents offered water to their animals two times a day. The main sources for water being well, tube wells, river, and lake. Majority of animals were washed regularly (93.89%) only few animals (6.23%) not washed due to owner's ignorance.

Physical characters: The most common body colours observed in all age groups of animals were white, red and blackish, which was corroborated with results of Anonymous (2008) in Gaolao cattle of Vidarbha region. White skin was noticed in 65.46% animals followed by black 32.45% and 2.09% animals red, grey or yellowish (Figs 1,2). The colour of horn was generally grey and blackish. Hump small to moderate in cows and fairly developed in bulls. Dewlap was small to medium in size. Body was compact, cylindrical in shape with short legs and animals were noticed to be strong and active. Ears were short, erect and horizontal in orientation. In almost all animals (99.32%) muzzle colour was found black while only (0.41%) animals with reddish muzzle and (0.27%) animals with mottled muzzle. Eye lid and eye ball were black in 99.05% animals in 0.61% animals it was black and white and in 0.34% animals with yellowish colour. 99.53% animals' hooves were black while only 0.47% animals were of red colour hooves. Udder shape was observed as bowl in 34.85% cows, rounded in 27.87%, trough 28.22% and pendulous in 9.06% cows. In 44.60% cows teats were cylindrical, 28.92% with funnel shape and 26.48% with pear shaped teats.

Morphometric traits: Age-wise means of different measurements are given in Table 1. In adult animals, bullocks had higher body measurements than the cows; these results are in agreement with the reports of Red Kandhari (Pundir

Table 1. Animal age-group wise body measurements

#	Group	N	Chest girth (in cm)	Body length (cm)	Height at withers (cm)	Horn length (cm)	Ear length (cm)	Tail length (cm)
1	G1	192	110.89 $\pm$ 1.42	87.66 $\pm$ 1.60	81.3 $\pm$ 1.0	—	14.32 $\pm$ 0.19	47.82 $\pm$ 0.78
2	G2	348	125.23 $\pm$ 1.12	101.95 $\pm$ 2.80	93.44 $\pm$ 1.01	—	16.6 $\pm$ 0.17	59.08 $\pm$ 0.68
3	G3	287	140.32 $\pm$ 0.87	113.19 $\pm$ 0.70	105.77 $\pm$ 0.79	12.42 $\pm$ 0.30	17.04 $\pm$ 0.18	68.82 $\pm$ 0.66
4	G4	640	153 $\pm$ 0.80	119.60 $\pm$ 0.57	108.93 $\pm$ 0.50	15.35 $\pm$ 0.22	18.64 $\pm$ 0.13	71.26 $\pm$ 0.51
5	G5	9	139 $\pm$ 7.45	92.37 $\pm$ 2.90	62.375 $\pm$ 2.02	5.4 $\pm$ 0.86	18.87 $\pm$ 1.40	62.3 $\pm$ 20

Horn length for group G1 and G2 was not considered due to developing stage.

and Singh 2008), however lower body measurements of breeding bull were noticed because of less number of observations and some bulls used for natural service before they have attained mature breeding age. Further it was noticed that the means of chest girth, body length and height at wither for five matured breeding bulls were 145.40, 117.40 and 120.00 cm, respectively. On an average cows had 140 cm chest girth, 113 cm body length, 105 cm height at wither, 12 cm horn length, 17 cm ear length and 68 cm long tail up to the switch. The corresponding figures in bullocks were 153, 119, 108, 15, 18 and 71 cm, respectively. The estimates of chest girth, body length and height at wither reported by Anonymous, 2008 in Gaolao cattle were higher than the present reports.

Performance traits: The average age at first oestrous and first calving was noticed to be 41.7 ± 0.2 and 53.53 ± 0.2 months, respectively. Higher estimates (43.95 and 54.74, months, respectively) were reported in Gaolao cattle by Anonymous (2008). In other recognised breed like Dangi the AFC (52.93 ± 0.23 months) recorded by Gokhale (2003) was noticed to be at par with the present study while for Khillar breed of cattle AFC (42.92 ± 0.13 months) was less by at least 1 year (Gokhale and Bhagat 2006) and for Red Kandhari (39.47 months) it was less by 14 months (Pundir and Singh 2008). There are some cows observed during survey which were under zero maintenance and gives milk about 4 to 5 litres per day indicating potential of milk production. Role of bullock in agriculture is very crucial in the point of ability to sustain in high rainfall and high temperature. The animal owners claimed that the type of animal they have can only survive in heat and tolerate the rainfall with working in their agriculture field because the animal size is small and it can move freely in small fields of paddy and also thrive on available leftovers like paddy straw and tree leaves. Average working hours per day was found

to be 6.67 ± 0.07 h similar results were also reported for Khillar and Dangi breed by Gokhale and Bhagat (2006) and Gokhale (2003), respectively.

Social, cultural and livelihood context: During the study it was noticed that the animal types mentioned in study and shown in photographs are preferred by the *Gond* communities and they have faith that large number of cattle is a matter of wealth in their society. The bullocks of the type observed in the study are in great demand in tribal area of Vidharbh. Tribal communities prefer to develop a pair of young bullocks and sale them in the market. The cost of one pair of young bullock is around 40,000 to 50,000 rupees. It may be concluded that cattle breed Telangpatti as mentioned in Old gazetteer of Chandrapur district in eastern part of Vidarbha region of Maharashtra state, is now more popularly recognized as Kathani. Further study on larger sample for breed characterization is recommended.

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