



Economic Promotes Umblachery Cattle Characteristics and Management from coastal region Tamilnadu, India

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Abstract

The Umblachery cattle breed is the native of the coastal districts i.e., Nagapattinam districts of Tamilnadu, India. This is a medium-sized draught cattle. The calves of this breed are red or brown in colour at birth. The red colour begins to change to grey at three to four months of age. Total grey colour is generally attained at six to eight months of age. Heifers and cows are grey in colour. In majority of cows dark grey colour is present on face, neck and pelvic regions. Bulls are grey in colour with dark grey on the hump, extremities, fore quarter and hindquarter. They have white star on the face. The switch of the tail is white or partially white in colour. The mean chest girth, body length and height at withers of bulls, bullocks and cows were 145, 118, and 112 cm; 151, 119 and 117 cm and 135, 109 and 105 cm respectively. The principal body measurements reveal that this breed of cattle is of medium size and smaller than other breeds of Tamilnadu. This breed is suitable for ploughing in marshy paddy fields of the deltaic breeding tract because of its medium size. A pair of bullocks was able to pull 2000-2200 kg over a distance of 20 km in seven hours. Pure breeding of Umblachery breed was done mostly by natural mating.

Keywords: characterization, Income ,reproduction, Umblachery.

Introduction

Umblachery cattle is native of Thanjavur, Thiruvarur and Nagapattinam districts of Tamil Nadu, India. This breed gets its name from the place of its origin – the Umblachery village in Nagapattinam district of Tamilnadu. It is variedly known as Jathi madu/ Mottai madu/ Molai madu/ Therkathi madu. Umblachery is a draught breed of the zebu type, similar to Kangayam but smaller, and used for agricultural work. The males generally find use in ploughing, carting, thrashing and paddling. This breed is capable of doing continuous work for six to seven hours under the hot sun and is suitable for ploughing in marshy paddy fields because of its medium size.

The practice of dehorning of bullocks is peculiar in the Umblachery cattle. Dehorning of male calves is at about 10-12 months of age. During dehorning, there is a practice of pruning of ears. Umblachery breeds by natural mating and artificial insemination in few animals. The Umblachery of eastern and central Tamil Nadu is thought to have derived from cross-breeding of local cattle with animals of the Kangayam cattle breed of the same state.[3]:319 It is distributed in the coastal plains of the districts of Nagapattinam, Tiruvarur and Thanjavur.[6] A census in 2000 found 283157 head.[2] In 2007 its conservation status was reported by the FAO as "endangered".[1]:59 In 2013 the breed population was reported to be between 39000 and 72000; in 2020 the conservation status reported to DAD-IS was "not at risk".[2]

Objectives

(1) To study the role of the individual and household factors in the decision-making and process of Economic Promotes Umblachery Cattle.

Methodology

The study has been conducted in the Umblachery Cattle nagapattinam district of Tamil nadu. where Umblachery village Primary data were collected through questionnaire in the (80) sample in agriculture farmer. Secondary data were collected through official area. The data from selected respondents were collected by personal interview method using a specially designed schedule. The period of study is one year from 2021-2022.

Income and Expenditure

Income is an important factor deciding the economic status of an individual. A merger income leaves a man to starve and pushes him to poverty. Most of the respondents are in middle income group. Expenditure refers to the sum of money spent on items used in a man's life. Normally workers spend more on necessities only.

TABLE No: 1.1

INCOME AND EXPENDITURE CORRELATION

INCOME(X) : 20 22 23 25 25 28 29 30 30 34

EXPENDITURE(Y) : 18 20 22 24 21 26 26 25 27 29

X	Y	x-X=25	y-Y=23	X ²	Y ²	XY
20	18	-5	-5	25	25	25
22	19	-3	-4	9	16	12
22	20	-3	-3	9	9	9
25	23	0	0	0	0	0
25	23	0	0	0	0	0
26	25	1	2	1	4	2
27	26	2	3	4	9	6
28	27	3	4	9	16	12
27	25	2	2	4	4	4
28	24	3	1	9	1	3
EX=250	EY=230	0	0	70	84	73

$$X=x/N=250/10=25, Y=y/N=230/10=23$$

$$R=xy/x^2.y^2=73/70.84=73/76.68 \quad r= 0.913$$

The result of correlation shows that there is high degree of positive correlation between income and expenditure Agricultural workers in this area.

Characteristics

The Umblachery is a small breed, standing just over a metre at the withers. Cows are grey, with darker markings on the face and neck and on the hindquarters; bulls are darker, and may have white markings such as white socks or a white star on the face. The horns are small in both sexes. Calves are born a reddish colour, which changes to grey within the first year of life.[3]: 320 .

Use

The Umblachery was bred for draught work, particularly in the rice paddies of the area.[3]:319 [5] It may also be milked: the milk has a fat content of about 4.9%; the annual yield is approximately 400 kg.[3]:319 .

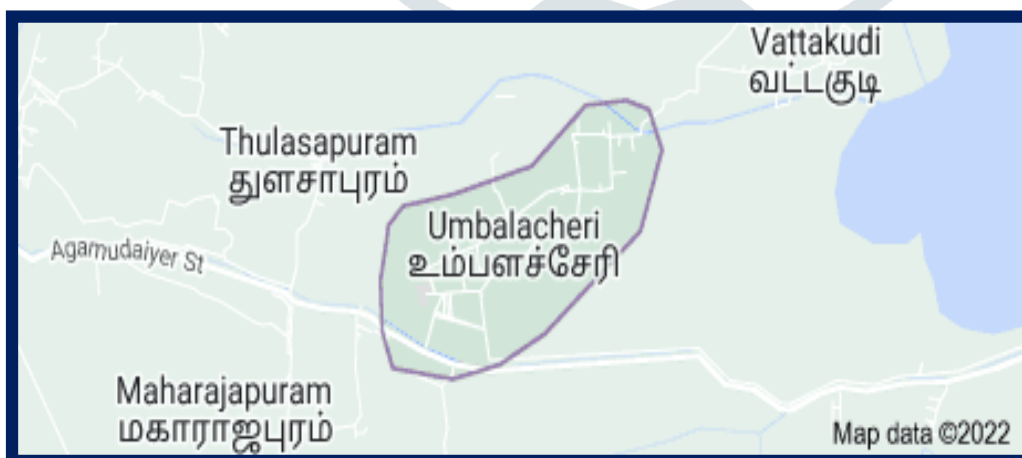
Conservation Efforts

As per the 1998 estimate, a total of 2.83 lakhs of Umblachery cattle were available in the breeding tract. However, the breeding tract has shrunken over the years. Introduction of crossbreeding and lack of concerted efforts for improvement and conservation have deteriorated the status of this breed. There has been a decline in Umblachery cattle population and also a dilution of the germplasm. The Government of Tamilnadu had established a farm in 1954 at Orathanadu (near Thanjavur) to develop this breed. A new farm was later started in Korukkai, near Umblachery village, especially to conserve Umblachery breed in its home region. Though the Government of Tamil Nadu has launched various initiatives in the Animal Husbandary Department, further efforts to conserve this rare breed is much required.

Umblachery breed is an excellent draught cattle of Tamilnadu noted for its strength and sturdiness. This breed is the outcome of selection for short stature, suitable for work in marshy rice fields of eastern districts of Tamilnadu, India. The habitat is in the Cauvery delta region and the agriculture production in this region is very intensive especially rice production. The total estimated population of Umblachery cattle in its breeding tract was 2,83,000. The breedable females, breeding bulls and working males constituted 41.66, 0.26 and 24 per cent respectively. The average herd size was three animals (Report 1999). The farmers in the home tract reported the decline in Umblachery population and dilution of germplasm. The reasons were increased mechanization of farm operations and attention towards increased milk production by rearing crossbred. The breeding tract of this breed has shrunken over the years. A systematic study was undertaken to establish breed characteristics and to document existing management practices of Umblachery cattle in its home tract. This will be useful for formulating suitable breed improvement programmes

Habitat and geographic distribution

The name Umblachery has been derived from its place of origin i.e., Umblachery village in Nagapattinam district of Tamilnadu. Umblachery cattle were distributed in coastal region; parts of Nagapattinam districts of eastern Tamilnadu (Figure 1).

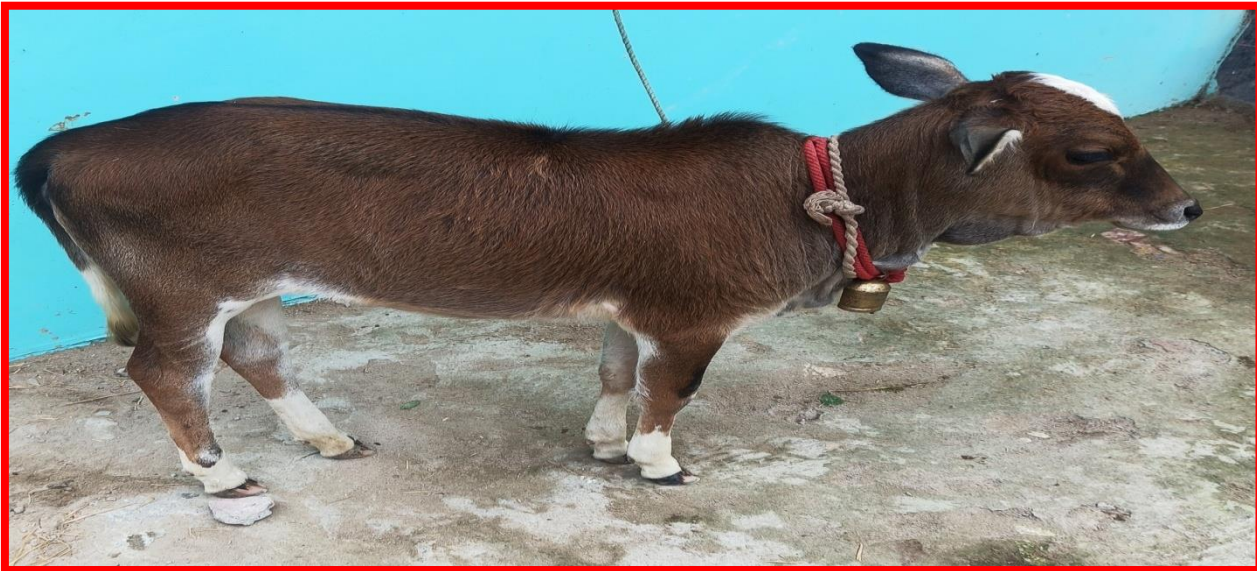


Umblachery villae map Figure 1.

Typical Umblachery animals were seen in Thiruthuraipoondi union of Thiruvavur district and Thalaigaynar union of Nagapattinam district. The home tract of Umblachery cattle is located approximately between 10° 18' and 10° 54' N and between 79° 18' and 79° 48' E with an estimated total area of 3500 square kilometre. The elevation of the

home tract ranges from 0 to 50 metre above the mean sea level. The mean maximum and minimum temperatures were 32.7° C and 25.1° C respectively. The home tract received a total annual rainfall of 1493 mm in 71.6 rainy days.

Morphological characteristics



Umblachery calves are red or brown in colour at birth (Figure2).



The red colour begins to change to grey at three to four months of age (Figure3).

Total grey colour is generally attained at six to eight months of age. Heifers and cows are grey (Figure4).



In the majority of cows, the dark grey colour is present on the face, neck and pelvic regions. In young males, darkening of hump, fore and hind quarters of the body occurs at the age of two years. Bulls are grey in colour with dark grey on the head, back and pelvis (Figure5).



After castration the dark part of the body begins to change to grey colour in about four months (Figure6).

This similar pattern of colour change is also observed in Kangayam breed of cattle, another draught breed of this



state. The forehead is fairly broad and always has a prominent white star. But the other breeds in this region lack white star in the forehead. Horns are medium in thickness, short and pointed. In adults curving horns were seen in most of the cases. The ears are short and erect and horizontally placed. The hump is fairly developed and medium in size in bullocks, well developed in bulls and small in cows. The dewlap is short, thin and extends up to the sternum. The legs are short, straight and with white markings called socks or stockings. The hooves are strong, small and black in colour or partly or wholly white in colour. The animals have a straight and narrow back. The tail is long and tapers

gradually below hock and the switch of the tail is white or partially white. The naval flap is inconspicuous and the penal sheath in males is well tucked up to the abdomen. The udder is not well developed; bowl shaped and tucked up with the abdomen. The teats are small and well set apart. But in Kangayam animals, the hooves and switch of the tail are completely black in colour.

Management practice

The farmers adopted both open and closed (Figure8) types of animal housing, but the majority were of the closed type.



Figure8. Closed type of housing

The animal houses were mostly of kutcha type with mud flooring and walls. In day times animals were tethered to a wooden pegs or trunk of the trees in the open area. The animals were generally housed in the sheds during the night. Paddy straw was main staple fodder fed to Umblachery cattle. The animals were usually taken for a distance of three to four kilometre for grazing. Concentrates feed, such as rice bran, soaked cotton seed and oil cakes, were fed only to working bullocks and cows in the early stage of lactation. In certain places herding is practiced (Figure9).



The month of January or February (after harvesting of the paddy) herdsman collected the animals from various households and maintained them on grazing for six months until June or July. During nights these herds were penned on agricultural fields for manure collection purposes and herdsman sold the collected manure from the

pens. The herd size usually ranged from 250 to 400 animals. The calves and young stock were not taken with this herd. The cows in the herd were naturally bred by one or two bulls from the same breed.

The male calves were dehorned at about 10-12 months of age. During dehorning, pruning of ears was also practiced. At the time of castration hot-iron branding was done across the face and gluteal region. The branding was done because of superstition among the farmers that it would increase the vigor or capacity of bullocks to work as well as disease resistance. Branding and pruning of ears were not done in females.

Pure breeding of Umblachery breed was done mostly by natural mating and artificial insemination in few animals. The bulls were allowed to breed at the age of 3 ½ to 4 years. Males were castrated at the age of about 2 ½ to 3 years by burdizzo castrator or by country method by pressing the testicle using two wooden sticks and were put to work at the age of 3 years and above.

Vaccinations against Black Quarter, Haemorrhagic Septicemia, Rinderpest and Foot and Mouth disease were done.

Breed improvement programme

The Government of Tamilnadu (Formerly Madras) established a farm in 1954 at Orathanadu (near Thanjavur) to develop this breed. A new farm was later started in Korukkai, near Umblachery village, especially to conserve Umblachery breed in its home region. The animals of this farm were sold to farmers to maintain the availability of the genetic resource. The Department of Animal Husbandry, Government of Tamilnadu has also stored semen of the Umblachery breed in the Exotic Cattle Breeding Farm, Eachenkottai, Thanjavur district.

Conclusions

Mechanization of farm operations and attention towards increased milk production by rearing crossbreds resulted in decline in population size in the home tract.. Therefore efforts for conserving unique germplasm suitable for agricultural operations in marshy fields is needed.

Characterization of Umblachery breed using microsatellite and other genetic markers is needed for identifying the other peculiarities of the breed and to identify the phylogenetic relationship with other breeds of cattle.

References

- [1]. FAO 1986 Animal genetic Resources Data Banks. 2. Descriptor Lists of cattle, Buffalo, Pigs, Sheep and Goats. FAO Animal Production and Health Paper 59(2), Food and Agriculture Organization of the United Nations, Rome. Pp.13-36.
- [2]. Littlewood R W 1936 Livestock of Southern India. Government of Madras, Madras.
- [3]. Pattabhiraman D 1962 Breeds of cattle in Tamilnadu. Director of Animal Husbandry, Madras.