

Original Article

Buffalo Breeds In Maharashtra (India)

Shivaji Shankar Maske



ABSTRACT

Agriculture is an important sector in the state economy as about 65 percent of the population in the state is depending on agriculture for their livelihood (Sharma). The share of Animal Husbandry in GSDP of Agriculture and allied activities during 2009-10 was 7.8 per cent (Economy survey of Maharashtra 2010-2011). Animal husbandry is a very important part of the agriculture in Maharashtra. Cattles are reared for milk and agriculture operations. Besides this various products from cattles are very useful as raw materials for several industries.

Keywords:

Buffalo Breeds ,Agriculture ,organic fertilizer .

Introduction:

The buffalo is an important economic livestock species, contributes greatly to the agrarian state economy. They play an important role in the livelihood of marginal farmers and landless labourers engaged in buffalo rearing. Buffalo is the dairy, drought and meat animal. Buffalo manure is an important source of organic fertilizer for increasing soil fertility. In Maharashtra buffalo is a main dairy animal. The state dairy industry of late has come to depend more and more on buffaloes. The buffalo is equally important in providing milk and farm yard manures.

Objectives:

The main objective of the present research paper is to study the buffalo breeds and their characteristics in Maharashtra state of India.

Data Base And Methodology:

The study is based on secondary sources of the data. The secondary data is obtained from 17th all India livestock census Maharashtra state 2003, Economic Survey of Maharashtra state and district statistical abstract of Solapur district, and Zilla Parishad Pashu Sanvardhan Khate, Solapur. Collected data is processed and presented in the tabular and graphical.

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Article Is Published On May 2014
Issue & Available At
www.weeklyscience.org

DOI: [10.9780/2321-7871/1202013/53](https://doi.org/10.9780/2321-7871/1202013/53)**Study Area:**

Maharashtra state is an administrative state in India. The state headquarters (Capital) are located at Bombay and sub capital located at Nagpur. The Maharashtra state is located between 17° 10' North to 18° 32' North latitudes and 74° 42' East to 76° 15' East longitudes. The total geographical area of Maharashtra state is 14895 Sq. Km. divided into thirty five district and total population of 112372 972 as per 2011 census. Maharashtra is endowed with livestock resources of vast genetic diversity and accounts for about 7.19 per cent (Livestock census 2007) of the India's livestock population.

Discussion:

According to 18th livestock census 2007, Maharashtra is endowed with livestock resources of vast genetic diversity and accounts for about 7.19 per cent of the India's livestock population. The state boasts of 5.55 per cent of the India's buffalo population. There are various types of buffaloes in the state, such as Pandharpuri, Murrah,

Nagpuri, Surati and Marathwadi etc (Table 1).

**Table No 1
Maharashtra State: Local Breed Wise Buffaloes Population (2003)**

Sr. No	Category	Buffalo Population
1.	Murrah	225023
2.	Nagpuri	191285
3.	Pandharpuri	186887
4.	Marathwadi	136129
5.	Surati	117013
	Non Descript	
	Total	6046379

Source: 17th Livestock Census India 2003.

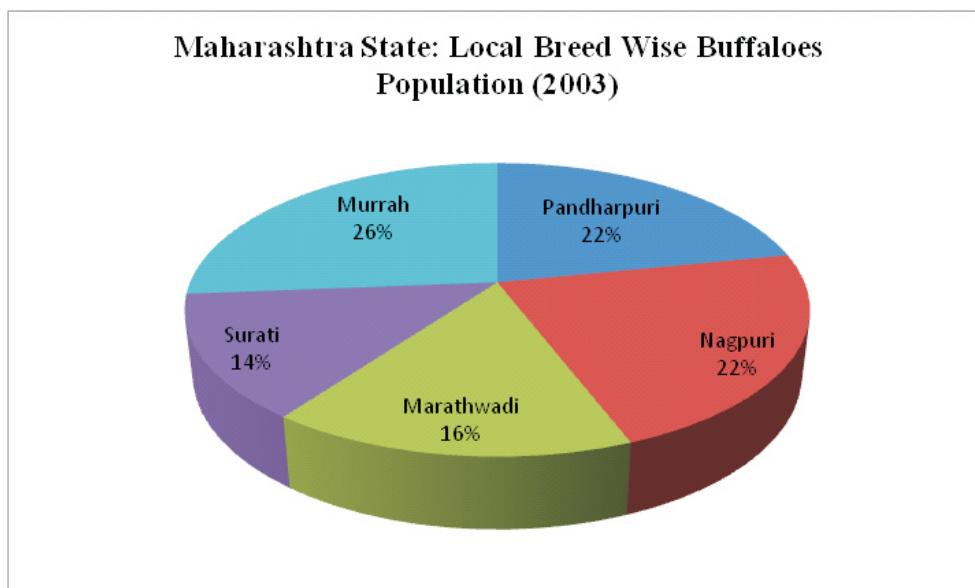


Fig No 1

Murrah Buffalo

Murrah is considered to be the best milch-cum-meat breed of buffaloes. The breeding tract is Rohtak, Hisar and Jind of Haryana, and Nabha and Patiala district of Punjab, and the union Territory of Delhi. The Murrah is the first largest variety of buffalo population in the state. The total population of Murrah buffalo is 225023 (Livestock census 2003) in Maharashtra state.

Characteristics:

1. The murrah buffalo-cow has a very deep massive frame with a comparatively light neck and head, short tightly curled horns, well-developed udder, and long tail reaching the fetlock.
2. Murrah animals are jet black and massive with long and deep body.
3. The animals are black in colour with white markings on switch of the tail.
4. Head of females is short, fine and clear cut. Bulls are heavy and broad with prominent cushion of short and dense hair.
5. The horns are short, flat and turning backwards, upwards and curling inwards in a spiral form.
6. Eyes are bright, active and prominent in females but not so prominent in males.
7. Fore and hind-quarters are drooping and hips are broad.
8. Teats are long and placed uniformly wide apart.

- 9.Tail is long reaching below the hock up to fetlock and ending in a white switch.
- 10.The udder prominent and well-developed with good-sized teats.
- 11.Average of length, height and heart girth of males is 150, 142 and 220 cm respectively and females are 148 (range 143 to 163), 133 (range 129 to 140) and 202 (range 197 to 220) cm respectively.
- 12.Average adult body weight is 567 (range 450 to 800) kg in male and 516 (range 350 to 700) kg in females.
- 13.Average age at first service and age at first calving is around 943.4 days (range 920 to 1355 days) and 1319 days (range 1214 to 1647 days).
- 14.Total lactation milk yield, 305 days milk yield, lactation length and dry period are 1751.8 kg (range 1003 to 2057kg), 1660.1 kg (range 1472 to 1962 kg), 298.7 days (range 269 to 337 days) and 154.8 days (range 127 to 176 days) respectively for overall lactation.
- 15.Murrah males are used extensively for draught and meat purposes.

Nagpuri Buffalo:

The Nagpuri is a dual-purpose breed of buffaloes. The breeding tract of this breed is Nagpur, Akola and Amravati district of Maharashtra. This is also called as Elitchpuri or Barari. These buffaloes are known as following names- Warhadi, Gaulani, Gaulli, Marathwadi, Purna-thali etc. The Nagpuri buffalo is the second ranking of buffalo in the state. The total population of Nagpuri buffaloes is 191285 (Livestock census 2003) in the Maharashtra state.

Characteristics:

- 1.Nagpuri buffaloes are black in colour with white patches on the face, legs and the tip of the tail.
- 2.The face is long and thin with a straight profile.
- 3.The neck is also longer with heavy brisket.
- 4.The horns are long, curved and carried back on each side of the neck, often behind the shoulders.
- 5.Ears are medium in size with pointed tips.
- 6.The tail is comparatively short in some buffaloes; it reaches below the hock. Switch of the tail is white.
- 7.Average of body length, height and heart girth of males is 180, 140 and 210 cm respectively and females are 129 (range 112 to 132), 123 (range 120 to 138) and 182 (range 160 to 200) cm respectively.
- 8.The male buffalo body weight is 520 kg and female buffalo 363.5 kg.
- 9.These buffaloes heifers mature late and average age at first calving is 1672 days. Buffaloes are good milkers and produce average 1055 kg (range 780 to 1520 kg) of milk, lactation length average 286 days. Average dry period is 129.1 days. Intercalving period ranges from average 430 days (350 to 721 days).
- 10.The male are good for heavy trotting work but slow in movement.

Pandharpuri Buffalo:

The Pandharpuri buffalo is an important buffalo breed in south east Maharashtra. The Pandharpuri buffalo is a native of Kolhapur, Solapur, Sangli and Satara district in south Maharashtra. These buffaloes are named after the name of the geographical area, i.e. Pandharpur block in Solapur district. It is hardy and well suited to dry conditions in this area. The Pandharpuri buffalo is third ranking of buffalo in the state. The total population of Pandharpuri buffaloes is 186887 (Livestock census 2003) in Maharashtra state.

Characteristics:

- 1.The Pandharpuri buffalo is a medium sized animal having long narrow face, very prominent and straight nasal bone, comparatively narrow frontal bone and long compact body.
- 2.Typical characteristics of this breed is its horns which are very long, curved back ward, upward and usually twisted outwards.
- 3.The body colour various from light black to deep black.
- 4.The neck is comparatively long and thin.
- 5.Teats are cylindrical and squarely.
- 6.The tail is long and just reaching below hock; the switch of the tail is white in majority of animals and extends just below the hock.
- 7.Udders of medium size, compact, somewhat hidden in between hind-quarters with firm attachment.
- 8.Average of body length, height and heart girth of Pandharpuri females are 132.9, 130 and 192.8 cm respectively.
- 9.Male and female calf's birth weight is around 26.8 kg. Adult body weight of Pandharpuri females is around 416 kg.
- 10.Pandharpuri buffaloes produce, on an average 1502 kg of milk in a lactation period of 330 days.

Total lactation and 305 days milk yield average 1197 and 1142 kg respectively in first lactation.

11. Average of age at puberty, age at first conception, age at first calving, dry period, service period and inter calving period are 795, 945, 1255, 144, 165 and 465 days.

12. The male buffaloes are good draught animals.

Marathwadi Buffalo:

The Marathwadi buffalo's native place is Marathwada region of Maharashtra. This buffaloes are mainly found in Parbhani, Nanded, Beed and Latur districts of Maharashtra. Body features of these buffaloes are just like Nagpuri buffalo. These buffaloes can exist on the grass of low quality in a mountain region. This buffalo also found in state, but its population is few. The total population of Marathwadi buffalo is 136129 (Livestock census 2003) in the state.

Characteristics:

1. Marathwadi buffaloes are of light to medium built.
2. Coat colour various from grayish-black to jet black, although white markings on forehead.
3. Horns are medium in length, parallel to neck, reaching up to shoulder but never beyond shoulder blade like those commonly seen in pandharpuri buffaloes and usually not flat.
4. Forehead is moderately broad, and eyes are generally red tinged.
5. Neck is short. Legs and feet are properly set which in males suit for draught and transportation in hilly tract.
6. Tail is of moderate length reaching up to hock.
7. The weight of buffalo is 400 kg and 450 kg in male.
8. Age at first calving is around 1670 days. Lactation yield range from 485 to 960 kg in a lactation of about 302 days.
9. Gestation period, calving interval and dry period in these buffaloes are 310, 430 and 134 days respectively.
10. The male buffaloes are used for draught purposes.

Surati Buffalo:

The home tract of Surati buffaloes is in the southwestern part of Gujarat comprising Kheda, Vadodara, Bharuch and Surat district. The Surati breed is also known as the 'Deshi' or 'Nadiadi'. These buffaloes also found in the state, but its population is few. The total population of Surati buffalo is 117013 (Livestock census 2003) in the state.

Characteristics:

1. The body is well shaped and medium sized; the barrel is wedge shaped.
2. The skin colour is black or brown and the colour of the hair various from rusty brown to silver grey.
3. Head is elongated, fairly broad and rounded (convex) between horns.
4. Horns are flat, of medium length, stickle shaped and are directed downward and backward, and then turn upward at the tip to form a hook.
5. Eyes are round, bulging (prominent) with bright and intelligent look; frequently a white streak of hair occurs over the eyebrows.
6. Ears are medium sized with reddish colour inside. The lower border of the ear is frequently fringed with white hair.
7. Neck is long and thin in females but thick and heavy in the bulls.
8. Teats are of medium size and squarely placed.
9. Tail is fairly long, thin and flexible ending in a white tuft.
10. The udder is well shaped, well developed and well set on the barrel. It is soft and pliable. The teats are of medium size and squarely placed.
11. Average body length, height and heart girth are 142, 130 and 190 cm respectively in males and 119, 125 and 184 cm respectively in females.
12. Adult body weight is around 500 kg in males and 383 kg in females.
13. Age at first service, age at first calving, total lactation milk yield and 305 days milk yield average is 750 days (range 485 to 970 days), 1693 days (range 1050 to 1770 days), 1285.4 (range 1256 to 2208) and 1289.5 (range 1110 to 1292) kg respectively in over all lactation.
14. Lactation length, dry period, service period and calving interval are 344.7 (range 280 to 405), 185 (range 160 to 205), 142.6 (range 93 to 164) and 534.7 (range 430 to 564) days respectively in overall lactation.
15. Surati male buffalo are used for draught purpose and good for light work.

Conclusion:

Buffaloes are an important economic livestock species contributing greatly to the Indian economy. Buffaloes are very important domestic animals in study regions. They play an important role in the livelihood of marginal farmers and landless labourers engaged in buffalo farming. Buffaloes are mostly reared for dairy purposes. So buffalo is the main dairy animal in the study region. During the 17th livestock census 2003, the buffaloes with special categories i.e. Murrah, Nagpuri, Pandharpuri, Marathawadi and Surati are reared, out of it Murrah and Surati are high yielding breeds, and the commercial farmers are rearing the Surati and Murrah buffaloes with the economical point of view.

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