

New Breeds of Cattle and Buffalo

National Bureau of Animal Genetic Resources
Karnal 132 001 (Haryana)

Motu Cattle

I. GENERAL DESCRIPTION

1. Name of the breed Motu
2. Synonymes Deshi
3. Background for such a name Heavy concentration is in Motu area of Malkangiri district in Orissa
4. Species name *Bos indicus*
5. Most closely related breeds (in appearance) Khariar
6. Since when the breed is known Since long time
7. Estimated population (Approx)
 - a. Year of estimation 2007
 - b. Population 1,00,000
 - c. Source /Reference Project on survey, evaluation and characterization of Motu cattle, implemented by OLRDS & OUAT, Orissa
8. a. Native tract of distribution in terms of longitude and latitude Longitude 17° 45' E to 18° 40' E
Latitude 81° 10' N to 82° 00' N
- b. Approximate area of distribution 5000 sq.km
- c. Place (s) Southern part of Malkangiri district and adjoining area of Chhattisgarh and Andhra Pradesh. Heavy concentration is in Motu, Kalimela, Podia and Malkangiri area of Malkangiri district in Orissa
9. a. Communities responsible for developing the breed Koya tribals
- b. Description of community (Farmers/nomads/isolated/tribals) Tribals
10. Herd size
 - a. Average size 60
 - b. Composition Breeding females: 45%, Replacement females (1-3 yrs.): 15%, Calves: 15%, Breeding bulls: 10%, Replacement males (1-3 yrs.): 12%, Bullocks: 3%
11. Utility of the breed Draught, manure, milk

(Milk/meat/draught/
manure/other specify)

12. Basic temperament of the breed Docile
(docile /moderate /tractable /wild)

II. PHYSICAL CHARACTERS

1. Colour
 - a. Coat colour Mainly brown (reddish) sometimes grey. Few animals are white in colour
 - b. Muzzle Black
 - c. Eyelids Black
 - d. Tail Mainly black sometimes grey
 - e. Hoofs Black
2. Horns
 - a. Colour Black
 - b. Size (cm) Male: 6.23±0.21, Female: 3.35±0.18
 - c. Shape (Straight/curved) Straight
 - d. Orientation Upward with rounded tip
3. Ears
 - a. Length (cm) 19.50
 - b. Orientation Horizontal
4. Head
 - a. Forehead Straight
 - b. General description Proportionate to body size
5. Body
 - a. Hump Medium
 - b. Dewlap Medium
 - c. Naval flap Small
 - d. Penis sheath flap Small
6. Udder
 - a. Shape Bowl
 - b. Udder size Small
 - c. Teat shape Cylindrical
 - e. Teat tip Round
 - f. Milk vein Small

III. PERFORMANCE

1. Body weight

Weight at	Weight (kg)	
	Male	Female
Birth	12.23±0.32	11.45±0.45
Pre-weaning weight	23.27±0.43	22.77±0.36
12 months	57.79±1.12	52.05±1.07
Adult weight	171.89±1.12	137.26±1.17

2. Body measurements (in cm)					4. Species name	<i>Bos indicus</i>
					5. Most closely related breeds (in appearance)	-
					6. Since when the breed is known	Not known
					7. Estimated population (Approx)	
					a. Year of estimation	2008
					b. Population	10,000
					c. Source /Reference	Project on survey, evaluation and characterization of Ghumusari cattle, implemented by OLRDS, and OUAT, Orissa
3. Dairy performance					8. a. Native tract of distribution in terms of longitude and latitude	Longitude 84° 16' E to 85° 18' E Latitude 19° 10' N to 20° 28' N
					b. Approximate area of distribution	4000 sq.km
					c. Place (s)	Western part of Ganjam district and adjoining areas of Phulbani district. Heavy concentration is in Bhanjanagar, Sorada and Aska area of Ganjam district
4. Reproduction					9. a. Communities responsible for developing the breed	Not specific
Males					b. Description of community (Farmers/nomads/isolated/tribals)	Farmers
(i) Age at first mating (days)					10. Herd size	
					a. Average size	50
Females					b. Composition	Breeding females: 46%, Replacement females (1-3 yrs.): 20%, Calves: 20%, Breeding bulls: 2%, Replacement males (1-3 yrs.): 8%, Bullocks: 4%
(i) Age at first oestrus (days)					11. Utility of the breed (Milk/meat/draught/manure/other specify)	Draught, milk, manure and fuel
(ii) Oestrus cycle duration (days)					12. Basic temperament of the breed (docile/moderate/tractable/wild)	Docile
(iii) Oestrus duration (hrs)						
(iv) Age at first mating (days)						
(v) Age at first calving (days)						
(vi) Service period (days)						
(vii) Calving interval (days)						
5. Draught performance						
(i) Purpose (ploughing, threshing, power etc.)						
(ii) Physical parameters						
Rectal temperature (°F)						
Respiration rate /min.						
Pulse rate /min						
(iii) Average duration of work per day (h)						
6. Drought tolerance						
7. Heat tolerance						

Source

- Dash S.K. and Sethi B.P. 2007. *Cattle Genetic Resources of Orissa –Motu*. Orissa Livestock Resources Development Society (OLRDS) and Orissa University of Agriculture & Technology (OUAT), Bhubaneswar.

Ghumusari Cattle

Accession No. INDIA_CATTLE_1500_GHUMUSARI_03032

I. GENERAL DESCRIPTION

- Name of the breed: Ghumusari
- Synonyms: Deshi
- Background for such a name: Heavy concentration is in Ghumusar area of Ganjam and Phulbani districts of Orissa

II. PHYSICAL CHARACTERS

- Colour
 - Coat colour: Mainly white sometimes grey
 - Muzzle: Mainly black sometimes grey
 - Eyelids: Black
 - Tail: Mainly Black sometimes Grey
 - Hoofs: Black
- Horns
 - Colour: Black
 - Size (cm): Male: 8.72±1.54, Female: 7.47±1.67

c.	Shape (Straight/curved)	Curved. Some animals have straight horns
d.	Orientation	Upward, inward
3.	Ears	
a.	Length (cm)	18.69
b.	Orientation	Horizontal
4.	Head	
a.	Forehead	Straight
b.	General description	Small head with forehead being flat, broad and depressed in between the eyes
5.	Body	
a.	Hump	Medium
b.	Dewlap	Medium in male and small in female
c.	Naval flap	Small
d.	Penis sheath flap	Medium
6.	Udder	
a.	Shape	Bowl
b.	Udder size	Medium
c.	Teat shape	Cylindrical
e.	Teat tip	Round
f.	Milk vein	Medium

III. PERFORMANCE

1. Body Weight

Weight at	Weight (kg)	
	Male	Female
Birth	14.82±0.45	13.83±0.65
Pre-weaning weight	34.88±0.92	33.46±0.63
12 months	80.58±2.67	72.18±1.67
Adult weight	208.52±4.56	166.76±3.25

2. Body measurements (in cm)

Measurements	Male	Female
Chest girth	136.14±2.25	126.27±2.31
Body length	116.02±1.69	107.86±0.71
Height at withers	108.09±1.51	102.91±1.58

3. Dairy performance

Parameter	Lactation			
	I	II	III	IV
Daily milk yield (l)	1.64	1.72	1.92	1.95
Peak milk yield (l)	2.12	2.28	2.52	2.52
Lactation length (days)	280.65	306.32	316.44	322.23
Lactation milk yield (l)	460.27	526.87	607.56	628.35
Fat %	4.91	4.88	4.86	4.86
SNF %	8.52	8.53	8.54	8.54

4. Reproduction

Males

(i) Age at first mating (days) 1146.85

Females

(i)	Age at first oestrus (days)	1169.58±11.19
(ii)	Oestrus cycle duration (days)	21
(v)	Oestrus duration (hrs)	24
(vi)	Age at first mating (days)	1217.24±12.28
(v)	Age at first calving (days)	1496.87±12.17
(vi)	Service period (days)	133.49±5.65
(vii)	Calving interval (days)	412.22±3.41
5.	Draught performance	
(i)	Purpose (ploughing, threshing, power etc.)	All agricultural operations
(ii)	Physical parameters	
	Rectal temperature (°F)	101.6±0.1
	Respiration rate/min	72.2±0.8
(iii)	Average duration of work per day (h)	6
6.	Drought tolerance	Excellent
7.	Heat tolerance	Excellent

Source:

- Dash S.K. and Sethi B.P. 2008. *Cattle Genetic Resources of Orissa – Ghumusari*. Orissa Livestock Resources Development Society (OLRDS) and Orissa University of Agriculture & Technology (OUAT), Bhubaneswar.

Binjharpuri cattle

Accession No. INDIA_CATTLE_1500_BINJHARPURI_03033

I. GENERAL DESCRIPTION

1.	Name of the breed	Binjharpuri
2.	Synonymes	Deshi
3.	Background for such a name	Heavy concentration is in Binjharpur area of Jajpur district in Orissa
4.	Species name	<i>Bos indicus</i>
5.	Since when the breed is known	Since long time
6.	Most closely related breeds (in appearance)	-
7.	Estimated population (Approx)	
a.	Year of estimation	2007
b.	Population	67,000
c.	Source /Reference	Project on survey, evaluation and characterization of Binjharpuri cattle, implemented by OLRDS, and OUAT, Orissa
8. a.	Native tract of distribution in terms of longitude and latitude	Longitude 85° 40' E to 86° 44' E Latitude 20° 43' N to 21° 10' N
b.	Approximate area of distribution	3690 sq.km
c.	Place (s)	Whole Jajpur district and adjoining areas of Kendrapara and Bhadrak. Heavy concentration is in Bari, Binjharpur and

		Dasrathapur area of Jajpur district	Weight at		Weight (kg)	
		Not specific			Male	Female
9. a.	Communities responsible for developing the breed		Birth	19.42±0.67	17.83±0.82	
b.	Description of community (Farmers/nomads/isolated/tribals)	Farmers	Pre-weaning weight	41.76±1.12	39.21±1.23	
			12 months	98.72±4.23	93.25±3.26	
			Adult weight	254.71±7.32	207.05±5.32	
10. Herd size			2. Body measurements (in cm)			
a.	Average size	100	Measurements		Male	Female
b.	Composition	Breeding females: 45%, Replacement females (13yrs.): 15%, Calves: 22%, Breeding bulls: 3%, Replacement males (1-3 yrs.): 13%, Bullocks: 2%	Chest girth	144.20±2.32	136.20±2.84	
		Milk, draught, manure	Body length	126.32±2.32	115.10±1.14	
11. Utility of the breed (Milk/meat/draught/manure/other specify)			Height at withers	121.40±1.76	107.30±2.16	
12. Basic temperament of the breed (docile /moderate /tractable /wild)		Docile	3. Dairy performance			
			Parameter		Lactation	
					I	II
					III	IV
			Daily milk yield (l)	3.23	3.35	4.23
			Peak milk yield (l)	4.14	4.32	5.12
			Lactation length (days)	273.73	296.62	302.23
			Lactation milk yield (l)	916.45	993.68	1278.43
			Fat %	4.41	4.40	4.36
			SNF %	8.58	8.54	8.53
			4. Reproduction			
			Males			
			(ii) Age at first mating (days)	1090.45		
			Females			
			(i) Age at first oestrus (days)	912.32±4.23		
			(ii) Oestrus cycle duration (days)	21		
			(iii) Oestrus duration (h)	24		
			(iv) Age at first mating (days)	938.42±4.56		
			(v) Age at first calving (days)	1230.73±6.42		
			(vi) Service period (days)	126.25±3.41		
			(vii) Calving interval (days)	409.62±6.72		
			5. Draught Performance			
			(i) Purpose (ploughing, threshing, power etc.)	All agricultural operations		
			(ii) Physical parameters			
			Rectal temperature (°F)	101.6±0.1		
			Respiration rate /min.	20.1±0.6		
			Pulse rate /min	72.2±0.8		
			(iii) Average duration of work per day (h)	6		
			6. Drought tolerance	Excellent		
			7. Heat tolerance	Excellent		

II. PHYSICAL CHARACTERS

1. Colour		
a. Coat colour	White. Some animals are grey, black or brown in colour	
b. Muzzle	Black	
c. Eyelids	Black	
d. Tail	Mainly black sometimes grey	
e. Hoofs	Black	
2. Horns		
a. Colour	Black	
b. Size (cm)	Male: 21.17±2.86, Female: 12.70±1.31	
c. Shape (Straight/curved)	Curved	
d. Orientation	Upward, inward	
3. Ears		
a. Length (cm)	20	
b. Orientation	Horizontal	
4. Head		
a. Forehead	Straight	
b. General description	Head is in upright position and medium in size	
5. Body		
a. Hump	Large in males and medium in females	
b. Dewlap	Large in males and small in females	
c. Naval flap	Large	
d. Penis sheath flap	Medium	
6. Udder		
a. Shape	Bowl shaped	
b. Udder size	Medium	
c. Teat shape	Cylindrical in shape	
e. Teat tip	Round	
f. Milk vein	Medium	

Source:

- Dash S.K. and Sethi B.P. 2007. Cattle Genetic Resources of

Source:

- Dash S.K. and Sethi B.P. 2007. Cattle Genetic Resources of Orissa – Binjharपुरi. Orissa Livestock Resources Development Society (OLRDS) and Orissa University of Agriculture & Technology (OUAT), Bhubaneswar.

II. PHYSICAL CHARACTERS

1. Colour		
a. Coat colour	White. Some animals are grey, black or brown in colour	
b. Muzzle	Black	
c. Eyelids	Black	
d. Tail	Mainly black sometimes grey	
e. Hoofs	Black	
2. Horns		
a. Colour	Black	
b. Size (cm)	Male: 21.17±2.86, Female: 12.70±1.31	
c. Shape (Straight/curved)	Curved	
d. Orientation	Upward, inward	
3. Ears		
a. Length (cm)	20	
b. Orientation	Horizontal	
4. Head		
a. Forehead	Straight	
b. General description	Head is in upright position and medium in size	
5. Body		
a. Hump	Large in males and medium in females	
b. Dewlap	Large in males and small in females	
c. Naval flap	Large	
d. Penis sheath flap	Medium	
6. Udder		
a. Shape	Bowl shaped	
b. Udder size	Medium	
c. Teat shape	Cylindrical in shape	
e. Teat tip	Round	
f. Milk vein	Medium	

III. PERFORMANCE

- Body weight

Khariar Cattle

Accession No. INDIA_CATTLE_1500_KHARIAR _03034

I. GENERAL DESCRIPTION

1. Name of the breed Khariar
2. Synonymes Deshi
3. Background for such a name Heavy concentration is in Khariar area of Nuapada district in Orissa
4. Species name *Bos Indicus*
5. Most closely related breeds (in appearance) Motu
6. Since when the breed is known Since long time
7. Estimated population (Approx)
 - a. Year of estimation 2009
 - b. Population 50,000
 - c. Source /Reference Project on survey, evaluation and characterization of Khariar cattle, implemented by OLRDS, and OUAT, Orissa
8. a. Native tract of distribution in terms of longitude and latitude Longitude 82° 20' E to 82° 40' E Latitude 20° 00' N to 21° 05' N
- b. Approximate area of distribution 4400 sq.km
- c. Place (s) Nuapada district and adjoining area in Kalahandi and Bolangir district. Heavy concentration is in Khariar, Komna, Sinapali and Boden blocks of Nuapada district
9. a. Communities responsible for developing the breed Not specific
- b. Description of community (Farmers/nomads/isolated/tribals) Farmers
10. Herd size
 - a. Average size 60
 - b. Composition Breeding females: 48%, Replacement females (1-3 yrs.): 15%, Calves: 17%, Breeding bulls: 4%, Replacement males (1-3 yrs.): 13%, Bullocks: 3%
11. Utility of the breed (Milk/meat/draught/manure/other specify) Draught, milk, manure, fuel
12. Basic temperament of the breed (docile /moderate /tractable /wild) Docile

II. PHYSICAL CHARACTERS

1. Colour
 - a. Coat colour Mainly brown sometimes grey
 - c. Muzzle Black, occasionally Grey
 - d. Eyelids Black

- e. Tail Mainly black sometimes grey
- f. Hoofs Black
2. Horns
 - a. Colour Black
 - b. Size (cm) Male: 12.34±0.21, Female: 10.12±0.27
- c. Shape (Straight/curved) Straight
- d. Orientation Horizontal. Quite often Upward and inward
3. Ears
 - a. Length (cm) 18.6
 - b. Orientation Horizontal
4. Head
 - a. Forehead Straight
 - b. General description Proportionate to body size
5. Body
 - a. Hump Medium
 - b. Dewlap Medium
 - c. Naval flap Small
 - d. Penis sheath flap Small
6. Udder
 - a. Shape Bowl
 - b. Udder size Medium
 - c. Teat shape Cylindrical
 - e. Teat tip Round
 - f. Milk vein Small

III. PERFORMANCE

1. Body weight

Weight at	Weight (kg)	
	Male	Female
Birth	12.12±0.38	11.23±0.43
Pre-weaning weight	32.76±0.72	30.56±0.66
12 months	78.58±1.46	69.18±1.27
Adult weight	195.56±3.56	156.16±3.34

2. Body measurements (in cm)

Measurements	Male	Female
Chest girth	113.14±1.25	123.21±1.31
Body length	114.02±1.39	106.16±1.41
Height at withers	106.09±1.41	102.21±1.38

3. Dairy performance

Parameter	Lactation			
	I	II	III	IV
Daily milk yield (lt.)	1.14	1.38	1.52	1.25
Peak milk yield(lt.)	1.62	1.97	2.22	1.78
Lactation length (days)	270.65	282.32	295.44	293.23
Lactation milk yield (lt.)	308.54	389.60	449.07	366.54
Fat %	4.97	4.91	4.88	4.88
SNF %	8.74	8.67	8.66	8.65

4. Reproduction				Anand 21,911
Males			c. Source	18 th Livestock Census
(i) Age at first mating (days)	1176.67			(2007), A. H. Dept., Govt. Gujarat
Females			8. Strains (or within breed types)	An isolated separate population
(i) Age at first oestrus (days)	1213.42±8.21			Latitude 23° 19' N to 23°
(ii) Oestrus cycle duration (days)	21		9. a. Native tract of distribution in terms of	Longitude 68° 52' N 56' E to 70° 32' E
(iii) Oestrus duration (h)	24			2500 sq. km.
(iv) Age at first mating (days)	1251.67±6.73		b. Approximate area of distribution	
(v) Age at first calving (days)	1522.86±7.54		c. Place(s)	Kachchh district of Gujarat State
(vi) Service period (days)	239.15±2.22			
(vii) Calving interval (days)	512.12±2.65			
5. Draught Performance			Climate	
(i) Purpose (ploughing, threshing, power etc.)	All agricultural operations		Temperature	Maximum : up to 50°C
(ii) Physical parameters				Minimum : 5°C
Rectal temperature (°F)	101.7±0.2		Annual Rainfall	Hottest month : May
Respiration rate /min.	20.3±0.3		Annual duration of drought	Coldest month: January
Pulse rate /min	72.4±0.3		Soil type	250 mm
(v) Average duration of work per day (h)	6			March to mid June
6. Drought tolerance	Excellent			Soil of Banni area is highly calcareous, saline and loam sandy, poor water holding capacity, low permeability and prone to erosion
7. Heat tolerance	Excellent			

Source:

- Sethi B.P., Dash S.K. and Ray P.C. 2009. Cattle Genetic Resources of Orissa – Khariar. Orissa Livestock Resources Development Society (OLRDS) and Orissa University of Agriculture & Technology (OUAT), Bhubaneswar.

Feed and fodder resources and feeding practices

The important species of grasses in Banni grassland included: Jinjvo/marvel grass (*Dickanthium annulatum*), Dhaman / anjan (*Cenchrus ciliaris*), Khevali / gharola (*Sporobolus fertilis*), Ganthelo / khevan (*Eleusine compressa*), Okrich (*Sporobolus helvolus*), Dabh / dabhado (*Desmoslenchia bipinnata*) etc.

Banni Buffalo

Accession No. INDIA_BUFFALO_0400_BANNI_01011

I. GENERAL DESCRIPTION

1. Name of the breed	Banni			
2. Synonyms Kutchi and Kundi				
3. Background for such a name / origin	Name as per the geographical area of "Banni"		Feeding practices	Buffaloes in Banni area maintained under extensive production system and animals grazed during night in Banni grassland. In other part of Kachchh and Gujarat state semi-intensive production system adopted by the livestock keepers. Supplementary feeding provided to lactating/ advance pregnant animals
4. Species name	<i>Bubalus bubalis</i>			
5. Most closely related breeds (in appearance)	Phenotypically close to Murrah, but at molecular level Banni belongs to separate cluster			
6. Since when the breed is known	Maldharis of Banni came from Halieb in Afganishtan about 500 years ago with their animals in search of pasture			
7. Estimated population (Approx)				
a. Year of estimation	2007		10. a. Communities responsible for developing the breed	Maldharis of Banni area, Kachchh
b. Population	5, 25,115 (Gujarat)		b. Description of community (Farmers/nomads/isolated/tribals)	Nomads/traditional livestock keepers known as Maldharis are responsible for conservation and
Major Districts and Banni buffalo population	District Population			
	Kachchh	1,68,938		
	Sabarkantha	78,661		
	Surendranagar	55,588		
	Kheda	38,710		
	Banaskantha	35,142		



Figs 1–3. 1. Motu-Cattle. 2. Ghumusari-Cattle. 3. Binjharpuri-Cattle. (a, male; b, female)

improvement of Banni buffaloes. The Maldharis trace back their ancestry to Haileb in Afganistan from where they came to Banni (Kachchh) about 500 years ago with their animals in search of

- 11. Herd Book /Register established
- 12. Herd size
 - a. Average size

pasture. Yes. *Banni Pashu Ucherak Maldhar Sangathan* prepared a herd book of Banni buffaloes
Majority Maldharis maintained 15 to 25 animal



Figs 4–6. 4. Khariar-Cattle. 5. Banni-Buffalo. 6. Chilika-Buffalo (a, male; b, female)

	herds and the herd size varies from 10 to 100 or 150 animals		
b. Composition (%)	Male	Female	Total
Under 1 year	52.57	15.56	22.26
1 – 3 years	31.28	19.94	20.59
Above 3 years	16.14	63.50	57.14

13. Utility of the breed
(Milk /meat /draught /manure /other specify)

Milk production

14. Basic temperament of the breed
(docile /moderate /tractable / wild)

Docile, but in the presence of owner, also have very strong herd instinct and special bonding with their calves.

15. Any other information - Adapted to traditional extensive production system through night grazing in Banni grassland.
- Resistant to drought and harsh climatic condition
- Excellent in production and reproduction efficiency.

II. PHYSICAL CHARACTERS

1. Colour
 - a. Coat colour Mainly black, sometimes copper
 - b. Muzzle Black in majority animals and brown in copper colour animals
 - c. Eyelids Black and brown also
 - d. Tail switch White or black
 - f. Hoof Generally black and brown
2. Horns
 - a. Colour Generally black-gray and gray in both the sexes
 - b. Size Medium to large, heavy with 24 to 30 cm diameter in adult animals
 - c. Shape (Straight/curved) Curved
 - d. Orientation Vertical. Inverted double coiling (31.20%), inverted single coiling (68.80%)
3. Ears
 - a. Length (cm) 29.30 ± 0.08
 - b. Orientation Horizontal in majority animals
4. Head
 - a. Forehead (Convex/concave/straight) Broad and convex, White spot in some animals
 - b. Face length (cm) 53.66 ± 0.16
5. Body
 - a. Hump (Large/medium/small) Medium to large
 - b. Dewlap (Large/medium/small) Nil
 - c. Naval flap (Large/medium/small) Medium
 - d. Penis sheath flap (Large/medium/small) Medium
 - e. Tail length (cm) 88.39 ± 0.48
6. Udder
 - a. Shape (bowl/round/trough/pendulous) Bowl (56%), round (12%), pendulous (30%)
 - b. Udder size Fore-Quarter: Large to medium size
Rear-Quarter: Well developed and large to medium in size
 - c. Teat shape Conical in majority animals and also tube type
 - d. Teat tips Round and pointed

- e Milk vein Prominent

III. PERFORMANCE

1. Body weight (kg)
Adult weight Male: 525 to 625, Female: 475 to 575

2. Body measurements (in cm)

Measurements	Male		Female	
	Average	Range	Average	Range
Chest girth	214.08 ± 5.10	180 to 251	203.74 ± 0.60	130 to 230
Body length	143.67 ± 2.13	128 to 158	153.01 ± 0.57	115 to 180
Height at withers	137.64 ± 1.89	119 to 144	137.25 ± 0.38	125 to 160
Paunch girth	228.00 ± 6.44	195 to 263	217.78 ± 3.08	135 to 250

3. Dairy performance

Parameters	Overall lactations	
	Mean $\pm$ SE	Range
Daily milk yield (l)	11.53 ± 0.07	5.00 to 26.00
Peak milk yield (l)	14.87 ± 0.21	9.50 to 26.00
Lactation milk yield (l)	2857.21 ± 89.76	1095.12 to 6053.67
Lactation length (days)	300.96 ± 4.43	185 to 410
Fat %	6.65 ± 0.11	4.00 to 12.10
SNF %	8.79 ± 0.01	8.00 to 9.10

4. Reproduction

- a. Males
 - (i) Age at first ejaculation (days) 608 to 760
 - (ii) Age at first mating (days) 760 to 912
- b. Females
 - (i) Age at first mating (days) 912 to 1064
 - (ii) Age at first calving (days) 12.52 ± 7.60
 - (iii) Service period (days) 72.68 ± 1.39
 - (iv) Calving interval (days) 372.09 ± 2.43
5. Draught performance Not used for draught purpose
6. Drought tolerance Excellent (during summer water provided only once or two times in 24 hours)
7. Heat tolerance Excellent

Chilika Buffalo

Accession No. INDIA_BUFFALO_1500_CHILIKA_01012

I. GENERAL DESCRIPTION

1. Name of the breed Chilika
2. Synonymes Deshi

3. Background for such a name	Name of breed backs to the native tract, which is surrounding the Chilika lake in Orissa.
4. Species name	<i>Bubalus bubalis</i>
5. Most closely related breeds (in appearance)	-
6. Since when the breed is known	Since long time
7. Estimated population (Approx)	
a. Year of estimation	2007
b. Population	29,000
c. Source/Reference	Project on survey, evaluation and characterization of Chilika Buffalo, implemented by OLRDS, CBPS and OUAT, Orissa
8. a. Native tract of distribution in terms of longitude and latitude	Longitude 85° 05' E to 85° 40' E Latitude 19° 10' N to 19° 54' N
b. Approximate area of distribution	1000 sq.km.
c. Place (s)	Bhusandapur, Tangi, Parikuda, Maluda, Krishnaprasad, Brahmagiri and Satapada area surrounding Chilika lake.
9. a. Communities responsible for developing the breed	Not specific
b. Description of community (Farmers/nomads/isolated/tribals)	Farmers in general and small and marginal farmers in particular
10. Herd size	
a. Average size	300
b. Composition	Breeding females: 35%, Replacement females (1-3 yrs.): 17%, Calves 24%, Breeding bulls: 2%, Replacement males (1-3 yrs.): 15%, Bullocks: 7%
11. Utility of the breed	Milk, draught, manure.
Milk/meat/draught/manure/ (other specify)	The milk and curd of these buffaloes have better taste and preservation quality, and is preferred by local people. The curd from milk of Chilika buffalo can be preserved for 5-7 days at room temperature.
12. Basic temperament of the breed (docile /moderate / tractable /wild)	Moderate

II. PHYSICAL CHARACTERS

1. Colour
 - a. Coat colour Brownish black or black
 - b. Muzzle Black
 - d. Eyelids Black

- e. Tail Mainly black sometimes grey
- f. Hoofs Black
2. Horns
 - a. Colour Black
 - b. Size (cm) Male: 48.32±0.24, Female: 50.76±0.12
 - c. Shape (Straight/curved) Curved
 - d. Orientation Upward, inward
3. Ears
 - a. Length (cm) 23
 - b. Orientation Horizontal
4. Head
 - a. Forehead Straight
 - b. General description Head is in upright position and medium in size
5. Body
 - a. Hump Small
 - b. Dewlap Small
 - c. Naval flap Small
 - d. Penis sheath flap Medium
6. Udder
 - a. Shape Bowl/Round
 - b. Udder size Small
 - c. Teat shape Cylindrical
 - d. Teat tip Round
 - e. Milk vein Small

III. PERFORMANCE

1. Body weight

Weight at	Weight (kg)	
	Male	Female
Birth	18.06±0.19	17.67±0.11
Pre-weaning weight	46.40±0.39	44.44±0.33
12 months	178.11±1.13	170.93±0.82
Adult weight	352.56±2.48	341.38±1.23

2. Body measurements (in cm)

Measurements	Male	Female
Chest girth	172.63±0.33	171.42±0.12
Body length	122.72±0.26	120.58±0.12
Height at withers	125.87±0.78	123.64±0.56

3. Dairy performance

Parameter	Lactation			
	I	II	III	IV
Daily milk yield (l)	1.76	1.78	1.82	1.96
Peak milk yield(l)	2.45	2.48	2.62	2.85
Lactation length (days)	250.32	255.63	260.36	262.52
Lactation milk yield (l)	440.56	455.02	473.86	514.54
Fat %	8.62	8.57	8.72	8.68
SNF %	8.73	8.66	8.68	8.72

4. Reproduction

Males

(i) Age at first mating (days) 1065.62±4.63

Females

(i) Age at first oestrus (days) 1019.76±5.26

(ii) Oestrus cycle duration (days) 21

(iii) Oestrus duration (hrs) 20.30±0.24

(iv) Age at first mating (days) 1033.57±5.33

(v) Age at first calving (days) 1362.25±7.24

(vi) Calving interval (days) 426.54±3.52

5. Draught performance

(i) Purpose All agricultural operations
(ploughing, threshing,
power etc.)

(ii) Physical parameters

Rectal temperature (°F) 100.6±0.03

Respiration rate /min. 19.8±0.01

Pulse rate /min 70.6±0.04

(iii) Average duration of work
per day (h) 4

6. Drought tolerance Excellent

7. Heat tolerance Good

Source:

- Sethi BP, Dash SK and Ray PC. 2007. Buffalo Genetic Resources of Orissa – Chilika. Orissa Livestock Resources Development Society (OLRDS) and Chilika Buffaloes Promoters' Society (OUAT), Bhubaneswar.