

Sheep breeds in Rajasthan

CHOKLA



a) ADULT MALE



b) ADULT FEMALE

(also known as Chapper and Shekhawati)

a) Distribution. Churu, Jhunjhunu, Sikar and bordering areas of Bikaner, Jaipur and Nagaur districts of Rajasthan. Animals true to the breed type are found in Sikar and Churu districts.

b) Numbers. The total sheep population in the Chokla distribution area was 0.53 m according to the 1972 census and 0.511 m according to the 1977 census, thus showing a slight decline. Of these, adult males and adult females were 0.049 and 0.352 m respectively. Chokla is perhaps the finest carpet-wool breed, although most Chokla wool is now being diverted to the worsted sector because of the dearth of fine apparel-wool in the country. The breeding policy recommended by the National Commission on Agriculture and adopted by the Union Ministry of Agriculture and Rajasthan State Department of Sheep and Wool, is to cross Chokla with exotic fine-wool breeds (Merino and Rambouillet) to improve apparel-wool production and quality. There is need for conserving the breed, because its numbers are declining for natural reasons and owing to large-scale cross-breeding programmes for converting Chokla into an apparel-wool breed.

c) Climate

	Average	Range
Average monthly temperature (°C)		
minimum	17.3	5.8–26.5
maximum	31.9	22.0–39.7
Average monthly relative humidity (%)		
morning	66	44–83
evening	50	37–67
Annual rainfall (cm)	44.1	

d) Breed characteristics

i) Size (sources: 8 and personal observations)

	Adult males	Adult females
Body weight (kg)	34.98 ± 1.06 (42)	23.11 ± 0.011 (903)
Body length (cm)	67.83 ± 0.724 (52)	60.18 ± 0.066 (901)
Height at withers (cm)	66.89 ± 0.507 (52)	59.44 ± 0.170 (901)
Chest girth (cm)	77.77 ± 0.784 (52)	69.08 ± 0.073 (901)

ii) Conformation. Light to medium-sized animals. The face, generally devoid of wool, is reddish brown or dark brown, and the colour may extend up to the middle of the neck; the skin is pink. The ears are small to medium in length and tubular; ear length: 7.77 ± 0.09 cm (288). Both the sexes are polled. Tail is thin and of medium length; tail length: 24.57 ± 0.13 cm (288). The coat is dense and relatively fine, covering the entire body including the belly and the greater part of the legs.

e) Flock structure. Average flock size: 115. On average, a flock contains 13 adult males (including wethers), 73 adult females and 29 young.

f) Reproduction. In farmers' flocks, age at first breeding: males, 15 months; females, 18 months. Under farm conditions, age at first breeding (4, 5): 764.068 ± 28.55 days (64); age at first lambing (4, 5): $1\ 092.56 \pm 45.27$ days (48); lambing percentage on the basis of ewes available (4, 5): 35.69 (947); litter size: single.

g) Mortality (4, 5). 0 to 3 months: 28.81% (434); 3 to 12 months: 15.05% (107); adults: 12.06% (1 526). In farmers' flocks, mortality in adults: 4.78% (57); in lambs: 35.21% (57).

h) Breeding. Pure breeding except in small percentage of cases in which crossbreeding with exotic fine-wool breeds (Merino and Rambouillet) is being undertaken. The State government, through its Department of Sheep and Wool, is providing farmers' flocks with artificial insemination services, using exotic semen, as well as half-bred rams for natural service.

i) Performance

- Milk. Very poor; not milked.
- Meat: body weight (kg) (sources: 3, 4, 7, 8, 27, 34, 39)

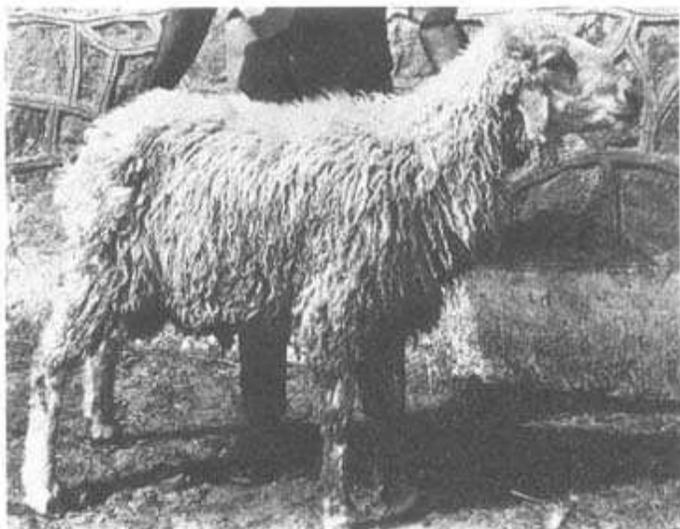
At birth	2.37 ± 0.02 (711)
At weaning	11.13 ± 0.13 (499)
6 months	13.46 ± 0.18 (230)
9 months	15.40 ± 0.17 (171)
12 months	17.89 ± 0.215 (133)

A large percentage of males not required for breeding are castrated and kept for wool production. Male lambs are sold for slaughter between 6 to 9 months of age.

- Wool production and quality (sources: 3, 4, 5, 13, 20, 21, 35)

Average 6-monthly greasy fleece weight (kg)	1.37 ± 0.01 (5 919)
Staple length (cm)	4.70 ± 0.07 (655)
Average fibre diameter (μ)	28.22 ± 0.20 (720)
Medullation (%)	24.01 ± 0.62 (656)
Fibre density (cm^2)	$1\ 008.7 \pm 46.5$ (24)

NALI



a) ADULT MALE



b) ADULT FEMALE

a) Distribution. Ganganagar, Churu and Jhunjhunu districts of Rajasthan, southern part of Hissar and Rohtak districts of Haryana.

b) Numbers. The total population of sheep in the Nali distribution area of Rajasthan was 0.845 m according to the 1972 census and 0.690 m according to the 1977 census. In Haryana, according to the 1972 census, there were 0.20 m Nali sheep: the figures for 1977 are not yet available. In 1972, total adult males were 0.062 m and adult females 0.444 m. There is thus a decline in the population of this breed in Rajasthan. Further, the National Commission on Agriculture has recommended crossing Nali with exotic fine-wool breeds for improving apparel-wool production and quality. Nali is a good carpet-quality wool breed, with the densest and heaviest fleeces among the breeds of Rajasthan and a wool of reasonably good carpet quality. There is need to conserve the breed in the light of its falling numbers as well as the large-scale cross-breeding programme being undertaken.

c) Climate

	Average	Range
Average monthly temperature (°C)		
minimum	17	4.7–28.1
maximum	32.9	20.5–42.1
Average monthly relative humidity (%)		
morning	61	33–80
evening	36	18–56
Annual rainfall (cm)	29.63	

d) Breed characteristics

i) Size (source: 10 and personal observations)

	Adult males	Adult females
Body weight (kg)	34.61 ± 1.75 (20)	24.34 ± 0.50 (1 420)
Body length (cm)	65.69 ± 0.96 (16)	66.18 ± 0.09 (1 423)
Height at withers (cm)	65.25 ± 0.74 (16)	64.11 ± 0.13 (1 423)
Chest girth (cm)	76.69 ± 1.08 (16)	80.09 ± 0.36 (1 423)

ii) Conformation. Medium-sized animals. Face colour is light brown, skin colour is pink. Both sexes are polled. Ears are large and leafy; ear length: 11.62 ± 0.10 cm (23). Tail is short to medium and thin: tail length: 17.14 ± 0.09 cm (28). Fleece is white, coarse, dense and long-stapled. Forehead, belly and legs are covered with wool.

e) Flock structure. Average flock size: 280. On average, a flock contains 35 adult males, 174 adult females, and 71 young.

f) Reproduction. In farmers' flocks, age at first breeding: ewes: 18 months; rams: 12 months; lambing percentage: 67%; under farm conditions, age at first breeding (4, 5): 686.52 ± 35.90 (50); age at first lambing (4, 5): 985.67 ± 57.04 days (337); lambing percentage on the basis of ewes available (4, 5): 39.57% (351/902). Conception rates reported elsewhere under farm conditions: 60.65% (338); litter size: single.

g) Mortality (4, 5). Under farm conditions, 0 to 3 months: 24.42% (305); 3 to 12 months: 24.23% (107); adults: 10.64% (1 522). In farmers' flocks, lamb mortality up to one year: 16.78%; adults: 5.62%.

h) Breeding. Pure breeding except in a few flocks where cross-breeding with exotic fine-wool breeds (Merino and Rambouillet) is being undertaken. The State government, through its Department of Sheep and Wool, provides farmers' flocks with artificial insemination service with exotic semen as well as half-bred rams for natural service. Rams selected on fleece weight, mostly bred from their own flock, and occasionally exchanged with other owners.

i) Performance

- Milk. Not milked.
- Meat: body weight (kg) (sources: 3, 4, 7, 27, 34, 40)

At birth	2.88 ± 0.03 (726)
At weaning	10.19 ± 0.14 (263)
6 months	13.30 ± 0.20 (174)
9 months	14.54 ± 0.21 (91)
12 months	17.74 ± 0.31 (74)

Efficiency of feed conversion (%) (12): 19.78 ± 2.56 (12); age at slaughter: 5 months; dressing percentage on pre-slaughter live weight 12): 48.25 ± 3.29 (12). Males not retained for breeding are usually sold between 6–9 months of age.

- Wool production and quality (sources: 3, 4, 13, 20, 21, 35, 48)

Average 6-monthly greasy fleece weight (kg)	1.46 ± 0.1 (6 702)
Staple length (cm)	8.31 ± 0.14 (604)
Average fibre diameter (μ)	34.92 ± 0.69 (935)
Medullation (%)	30.74 ± 0.40 (374)
Fleece density (cm ²)	1 271.33 ± 37.28 (72)

Both the clips, taken in March and September, are yellow, the September clips being golden yellow.

MARWARI



a) ADULT MALE



b) ADULT FEMALE

The name originates from the home tract of the breed: Marwad. The breed resembles black-headed Persian sheep but is smaller in size and has good fleece.

a) Distribution. Jodhpur, Jalore, Nagaou, Peli and Barmer districts, extending up to Ajmer and Udaipur districts of Rajasthan and the Jeoria region of Gujarat.

b) Numbers. The total sheep population in the Marwari distribution area in Rajasthan and Gujarat, according to the 1972 census, was 4.367 m; in 1977 it was 5.018 m. Of these, adult males were 0.452 m and adult females 3.230 m. The breed is being improved through selection for fleece weight and carpet quality.

c) Climate

	Average	Range
Average monthly temperature (°C)		
minimum	22.2	9.5–28.5
maximum	34	24.6–41.9
Average monthly relative humidity (%)		
morning	55.6	31–86
evening	27.5	15–61
Annual rainfall (cm)	35.5	

d) Breed characteristics

i) Size (source: 6, 30)

	Adult males	Adult females
Body weight (kg)	30.66 ± 0.46 (140)	26.18 ± 0.42 (791)
Body length (cm)	72.11 ± 0.76 (140)	68.52 ± 0.44 (791)
Height at withers (cm)	61.90 ± 0.36 (140)	58.85 ± 0.54 (791)
Chest girth (cm)	73.34 ± 0.38 (140)	70.01 ± 0.45 (791)

ii) Conformation. Medium-sized animals. Black face, the colour extending to the lower part of neck. Ears extremely small and tubular. Both sexes are polled. Tail is short to medium and thin; tail length: 17.91 ± 0.32 cm (791). Fleece is white and not very dense.

e) Flock structure. Flock size ranges from 200 to 500. On average, flocks contain 18 to 44 adult males, 129 to 323 adult females and 63 to 137 young.

f) Reproduction. In farmers' flocks, age at first breeding: females: 18 months; males: 12 months. Lambing percentage on the basis of ewes available (46): 87.00 (802); litter size: single.

g) Mortality (46). 0 to 12 months: 26.0% (353); adults: 3.43% (1 602).

h) Breeding. Pure breeding. Rams are selected primarily on fleece production and are produced from within owner's flock.

- a) ADULT MALE
- b) ADULT FEMALE
- c) FLOCK

i) Performance

- Milk. Not milked
- Meat: body weight (kg) (sources: 26, 42, 47)

At birth	2.98 ± 0.02 (617)
At weaning	8.16 ± 0.84 (101)
6 months	9.40 ± 0.20 (101)
9 months	14.65 ± 0.25 (101)
12 months	21.06 ± 0.04 (536)

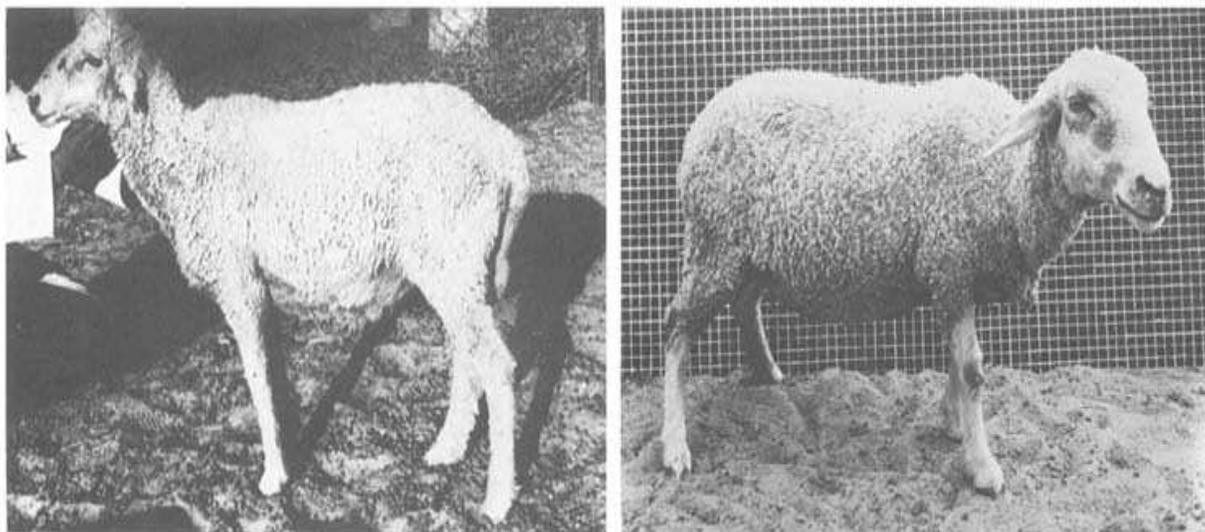
Male lambs not needed for breeding are sold for slaughter between the ages of 6 and 8 months.

- Wool production and quality (sources: 42, 49)

Average 6-monthly greasy fleece weight (kg)	0.89 ± 0.02 (1 441)
Staple length (cm)	6.56 ± 0.05 (1 343)
Average fibre diameter (μ)	36.93 ± 0.16 (1 406)
Medullation (%)	65.18 ± 1.66 (1 406)
Fibre density (cm ²)	1 714 ± 11.7 (294)

MAGRA

(formerly known as Bikaneri; also known as Bikaneri Chokhla and Chakri)



a) Distribution. Bikaner, Nagaur, Jaisalmer and Churu districts of Rajasthan. However, animals true to the breed type are found only in the eastern and southern parts of Bikaner district.

b) Numbers. The total sheep population in the Magra distribution area, according to the 1972 census, was 0.32 m, and according to the 1977 census it was 0.84 m; there thus appears to be an extremely large increase. This may however be erroneous, as the census is not taken by breeds but by areas and the increase may be due not so much to multiplication of Magra as to movement into the area of sheep from other adjoining areas. Of the total

population, 0.076 m were adult males and 0.543 m were adult females. This breed is the only lustrous carpet-wool producing breed. The most important strain of Magra (*Bikaneri Chokhla*) has flocks with extremely white and lustrous fleeces, found only in a few villages around Bikaner. The fleece is of good carpet quality. The breeding programme is to improve this breed through selection. Personal interviews with breeders as well as with the wool traders and industrialists in Bikaner indicated serious concern at the rapid reduction in numbers of Magra animals. Further, there is much crossbreeding with other breeds of the vicinity, so that the true Magra or Bikaneri Chokhla has a very small population, and there is therefore serious need for conservation.

c) Climate

	Average	Range
Average monthly temperature (°C)		
minimum	18.9	5.0–29.3
maximum	33.6	22.3–42.0
Average monthly relative humidity (%)		
morning	53	29–72
evening	32	15–53
Annual rainfall (cm)	30.47	

d) Breed characteristics

i) Size

	Adult males	Adult females
Body weight (kg)	26.85 ± 0.48 (80)	24.36 ± 0.45 (74)
Body length (cm)	65.02 ± 0.45 (80)	65.55 ± 0.31 (74)
Height at withers (cm)	63.63 ± 0.42 (80)	62.30 ± 0.44 (74)
Chest girth (cm)	73.28 ± 0.57 (80)	81.64 ± 0.51 (74)

ii) Conformation. Medium to large animals. White face with light brown patches around the eyes, characteristic of this breed. Skin colour is pink. Ears are small to medium and tubular. Both sexes are polled. Tail is medium in length and thin: tail length: 20.21 ± 0.41 cm (72). Fleece is of medium carpet quality, extremely white and lustrous and not very dense.

e) Flock structure. Average flock size is 150. On average, a flock contains 20 adult males, 95 adult females and 35 young.

f) Reproduction. In farmers' flocks, age at first breeding: females: 18 months; rams: 20 months. Lambing percentage on the basis of ewes available (48): 45.0 (540). Litter size: mostly single.

g) Mortality (48). 0–3 months: 29.0% (168); adults; 23.40% (943).

h) Breeding. Pure breeding. There is some selection of rams on the basis of wool production. Most flocks produce their own rams, and some exchange rams with other owners.

i) Performance

- Milk. Not milked
- Meat: body weight (kg) (sources: 14, 16, 19, 23, 24, 28, 33, 34, 37)

At birth	2.98 ± 0.02 (5 660)
At weaning (90 days)	11.7 ± 0.13 (415)
At weaning (135 ")	17.83 ± 0.05 (4 006)
6 months	20.14 ± 0.10 (1 812)
9 months	21.82 ± 0.19 (343)
12 months	27.99 ± 0.19 (3 445)

Dressing percentage on pre-slaughter live-weight basis (1): 44.75 ± 0.55.

- Wool production and quality (sources: 15, 37, 43, 44, 45, 48)

Average 6-monthly greasy fleece weight (kg)	1.09 ± 0.002 (1 833)
Staple length (cm)	5.81 ± 0.02 (2 851)
Average fibre diameter (µ)	32.45 ± 0.35 (2 995)
Medullation (%)	48.29 ± 0.39 (2 968)

Shorn three times a year. February clip is white, July clip is tinged white and November clip is yellow.

JAISALMERI



a) ADULT MALE



b) ADULT FEMALE

The name is derived from the home tract, Jaisalmer.

a) Distribution. Jaisalmer, Barmer and Jodhpur districts of Rajasthan. Pure specimens are found in southwestern Jaisalmer, extending up to northwestern Barmer and southern and western Jodhpur.

b) Numbers. The total sheep population in the Jaisalmeri distribution area, according to the 1972 census, was 0.313 m, and according to the 1977 census 0.728 m. Of these, 0.066 m were adult males and 0.469 m adult females. This is the largest breed, in body size, of the eight breeds of Rajasthan, and produces good quality carpet-wool. There is a general feeling that the breed is declining in numbers, although this fact does not emerge from the 1972 and 1977 statistics. As indicated earlier, however, these numbers are calculated on the basis of the population in the districts or tehsils in which the breed is known to be located, and the census is not carried out on the basis of breed: there is thus a possibility that animals other than Jaisalmeri have been included. There is need for conserving this breed.

c) Climate

	Average Range	
Average monthly temperature (°C)		
minimum	19.0	7.9–28.5
maximum	33.6	22.6–41.6
Average monthly relative humidity (%)		
morning	54.0	29–81
evening	37.5	15–61
Annual rainfall (cm)	30.1	

d) Breed characteristics

i) Size

	Adult males	Adult females
Body weight (kg)	27.78 ± 0.76 (32)	29.94 ± 0.50 (46)
Body length (cm)	65.6 ± 0.49 (32)	68.55 ± 0.63 (44)
Height at withers (cm)	66.2 ± 0.70 (32)	66.91 ± 0.52 (44)
Chest girth (cm)	72.6 ± 1.02 (32)	82.39 ± 0.66 (44)

ii) Conformation. Tall, well-built animals. Black or dark brown face, the colour extending up to the neck. Typical Roman nose. Long drooping ears, generally with a cartilaginous appendage. Both sexes are polled. The tail is medium to long; tail length: 26.75 ± 0.68 cm (44). The fleece colour is white; fleece is of medium carpet quality and not very dense.

e) Flock structure. Flock sizes range from 200 to 300. The flocks contain on average 22 to 34 adult males, 123 to 185 adult females and 55 to 81 young.

f) Reproduction. In farmers' flocks, age at first breeding; males: 24 months; females: 16 months. Lambing percentage on the basis of ewes bred (20): 68.13 (135); usual tuppung percentage: 90%; another estimated lambing percentage, reported from a government farm in Rajasthan, was 75%. Litter size: usually single.

g) Mortality. In adults: 8.20% (121).

h) Breeding. Pure breeding. Rams are selected on the basis of fleece weight and usually bred by the flock owners; in some cases they are exchanged with other owners.

i) Performance

- Milk. Not milked.
- Wool production and quality (sources: 20, 49)

Average 6-monthly greasy fleece weight (kg)	0.77 ± 0.07 (28)
Staple length (cm)	6.46
Average fibre diameter (μ)	39.1 ± 2.76 (35)
Medullation (%)	64.1 ± 3.1 (35)

PUGAL



a) ADULT FEMALE



b) ADULT FEMALE

The name originates from the Pugal area of Bikaner district in which the breed has its home tract.

a) Distribution. Bikaner and Jaisalmer districts of Rajasthan, but pure specimens are available only in the northwestern border area of the two districts.

b) Numbers. The total sheep population in the Pugal distribution area, according to the 1972 census, was 0.146m; according to the 1977 census, numbers rose to 0.293 m. Of these, 0.026 m were adult males and 0.189 m adult females. Considering these small numbers, there is need for conservation of the breed. The breeding policy is to improve this carpet-wool breed through selection for greasy fleece weight and carpet quality.

c) Climate

	Average	Range
Average monthly temperature (°C)		
minimum	18.2	5.0–29.3
maximum	33.6	22.3–42.0
Average monthly relative humidity (%)		
morning	53	29–72
evening	32	15–53
Annual rainfall (cm)	26.1	

d) Breed characteristics

i) <u>Size</u>	Adult males	Adult females
Body weight (kg)	31.79 ± 0.63 (80)	26.96 ± 0.32 (60)
Body length (cm)	68.62 ± 0.53 (80)	65.64 ± 0.51 (59)
Height at withers (cm)	64.88 ± 0.46 (80)	62.07 ± 0.35 (59)
Chest girth (cm)	77.49 ± 0.59 (80)	79.68 ± 0.57 (59)

ii) Conformation. Fairly well-built animals. Black face, with small light brown stripes on either side above the eyes; lower jaw typically light brown. The black colour may extend to neck. Ears are short and tubular. Both sexes are polled. Tail is short to medium and thin; tail length: 21.05 ± 0.42 cm (58). White fleece, of medium carpet quality, not very dense.

e) Flock structure. Average flock size: 150. On average, a flock contains 24 adult males, 96 adult females and 30 young.

f) Reproduction. In farmers' flocks, age at first breeding: females: 15 months; males: 18 months. Litter size: generally single.

g) Breeding. Pure breeding. Rams, selected on the basis of fleece production, are generally produced within the flock.

h) Performance: Wool production and quality (source: 49)

Average 6-monthly greasy fleece weight (kg)	0.80 ± 0.02 (72)
Staple length (cm)	5.71 ± 0.04 (513)
Average fibre diameter (μ)	35.13 ± 1.00 (524)
Medullation (%)	61.86 ± 0.62 (524)

MALPURA



a) ADULT MALE



b) ADULT FEMALE

This breed is very similar to Sonadi (see 2.2.8 below) but is better in wool production and quality and in body size; this could be due to better environmental and nutritional conditions in the region where Malpura is the predominant breed as compared to conditions in the home tract of Sonadi.

a) Distribution. Jaipur, Tonk, Swaimadhapur and adjacent areas of Amjer, Bhilwara and Bundi districts in Rajasthan.

b) Numbers. The total sheep population in the Malpura distribution area, according to the 1972 census, was 1.018 m, and according to the 1977 census 0.899 m, showing some decline. Of these, 0.081 m were adult males and 0.579 m were adult females.

c) Climate

	Average	Range
Average monthly temperature (°C)		
minimum	18.3	7.3–27.7
maximum	31.7	20.0–40.6
Average monthly relative humidity (%)		

morning	56	29–82
evening	36	17–71
Annual rainfall (cm)	60.25	

d) Breed characteristics

i) <u>Size</u> (source: 9)	Adult males	Adult females
Body weight (kg)	41.57 ± 1.14 (66)	24.28 ± 0.47 (816)
Body length (cm)	72.12 ± 0.70 (52)	63.91 ± 0.14 (872)
Height at withers (cm)	71.93 ± 0.68 (52)	64.04 ± 0.22 (872)
Chest girth (cm)	83.62 ± 0.89 (52)	70.11 ± 0.21 (872)

ii) Conformation. Fairly well-built animals, with long legs. Face light brown. Ears are short and tubular, with a small cartilaginous appendage on the upper side; ear length: 6.22 ± 0.08 cm (496). Both sexes are polled. Tail is medium to long and thin; tail length: 24.26 ± 0.23 cm (496). White fleece, extremely coarse and hairy. Belly and legs are devoid of wool.

e) Flock structure. The flock size ranges from 50 to 100 or, in mixed farming conditions, from 20 to 30. On average, a flock contains 1 to 6 rams, 13 to 68 ewes and 5 to 25 young.

f) Reproduction. In farmers' flocks, age at first breeding: males: 10 months; females: 12 months. Under farm conditions, age at first breeding (39): 749.07 ± 21.82 days (216); age at first lambing (39): 990.60 ± 29.96 days (122); lambing percentage on the basis of ewes available (3, 4, 5): 81.80 (665/813). Litter size: single.

g) Mortality (3, 4, 5, 38). 0 to 3 months: 11.14% (1 271); 3 to 12 months: 13.51% (918); adults: 10.29% (3 860).

h) Breeding. Mostly pure breeding; to a limited extent, cross-breeding with Corriedale and Merino or their half-bred lambs. Native rams, selected on the basis of size, are generally produced within the flock, or occasionally exchanged with a neighbouring owner. There has been considerable introduction of Marwari rams into Malpura flocks for improving wool production and quality. These cross-breeds have a black face.

i) Performance

- Milk. Lactation yield (18): 21.366 kg; length: 105 days. Under farmers' flock conditions, average milk yield: 250 to 500 g per day; ewes are milked for 3 months.
- Meat: body weight (kg) (sources: 3, 4, 5, 21, 38)

At birth	2.52 ± 0.01 (1 300)
At weaning	9.14 ± 0.09 (998)
6 months	12.55 ± 0.13 (494)
9 months	17.26 ± 0.18 (336)
12 months	20.63 ± 0.29 (222)

Age at slaughter: six months; dressing percentage on pre-slaughter live-weight basis (38): 47.15 ± 0.66 (214); efficiency of feed conversion (38): 19.84 ± 2.12% (146); bone/meat ratio (5): 1:7.263 (74). Under farmers' flock conditions, males for slaughter are sold at ages ranging from 6 to 9 months.

- Wool production and quality (sources: 3, 4, 5, 20, 21, 36, 38, 49)

Average 6-monthly greasy fleece weight (kg)	0.54 ± 0.004 (6 322)
Staple length (cm)	5.60 ± 0.0001 (1 331)
Average fibre diameter (μ)	41.95 ± 0.37 (453)
Medullation (%)	71.84 ± 0.17 (363)
Fibre density (cm ²)	626.25 ± 28.4 (24)

SONADI



a) ADULT MALE



b) ADULT FEMALE

a) Distribution. Udaipur and Dungarpur districts and, to some extent, Chittorgarh district of Rajasthan; also extends to northern Gujarat.

b) Numbers. The total sheep population in the Sonadi distribution area, according to the 1972 census, was 1.76 m; according to the 1977 census it was 1.667 m. Of these, 0.150 m were adult males and 1.073 m were adult females.

c) Climate

	Average	Range
Average monthly temperature (°C)		
minimum	17.5	7.8–25.3
maximum	31.6	24.2–38.6
Average monthly relative humidity (%)		
morning	60	34–81
evening	43	23–75
Annual rainfall (cm)	66.0	

d) Breed characteristics

i) <u>Size</u> (source: 11)	Adult males	Adult females
Body weight (kg)	38.59 ± 0.98 (32)	21.20 ± 0.17 (743)
Body length (cm)	68.45 ± 1.14 (11)	60.58 ± 0.22 (811)
Height at withers (cm)	69.73 ± 1.20 (11)	61.28 ± 0.17 (811)
Chest girth (cm)	77.10 ± 1.07 (11)	66.62 ± 0.18 (811)

ii) Conformation. Fairly well built, somewhat smaller than Malpura (see 2.2.7 above), with long legs. Light brown face with the colour extending to the middle of the neck. Ears are large, flat and drooping; ear length: 17.56 ± 0.17 cm (391). Ears generally have a cartilaginous appendage. Tail is long and thin; tail length: 30.50 ± 0.42 cm (391). Both sexes are polled. Udder is fairly well developed. White fleece, extremely coarse and hairy. Belly and legs are devoid of wool.

e) Flock structure. Average flock size is 75, consisting of 5 adult males, 47 adult females and 23 young.

f) Reproduction. In farmers' flocks, age at first breeding: males: 10 months; females: 12 months. Under farm conditions, age at first breeding (39): 717.77 ± 26.22 days (76); age at first lambing (39): 989.36 ± 51.30 days (30); lambing percentage on the basis of ewes available (3, 4, 5, 21): 47.82% (230/481). In another report from a Rajasthan government farm, lambing percentage: 61.0%; litter size: single.

g) Mortality. 0 to 3 months (3, 4, 5, 38): 13.24% (654); 3 to 12 months (3, 4, 5, 38): 18.10% (277); adults (3, 4, 5): 7.92% (2 940). Adult mortality in farmers' flocks: 9.6% (82).

h) Breeding. Pure breeding, except in a small proportion of flocks in which the State government provides artificial insemination service from exotic fine-wool/dualpurpose breed rams, or natural service by half-bred rams arising from such crossings. Native rams are generally selected on size and bred from within the flock, or occasionally exchanged with neighbouring owners.

- Milk. Lactation yield (18): 23.752 kg; length: 105 days.
- Meat: body weight (kg) (sources: 3, 4, 5, 38)

At birth	2.40 ± 0.02 (659)
At weaning	9.29 ± 0.13 (428)
6 months	13.22 ± 0.21 (185)
9 months	16.19 ± 0.24 (152)
12 months	18.95 ± 0.26 (129)

Age at slaughter: six months; dressing percentage on pre-slaughter live-weight basis (38): 48.18 ± 0.62 (108); efficiency of feed conversion (38): 13.25 ± 1.02 (82); bone/meal ratio (5): 1:7.234 (101).

- Wool production and quality (sources: 3, 4, 5, 11, 38, 49)

Average 6-monthly greasy fleece weight (kg)	0.45 ± 0.01 (5 675)
Staple length (cm)	4.58 ± 0.27 (60)
Average fibre diameter (μ)	52.65 ± 1.77 (143)
Medullation (%)	88.15 ± 2.1 (60)
Fibre density (cm ³)	618.77 ± 50.33 (60)