

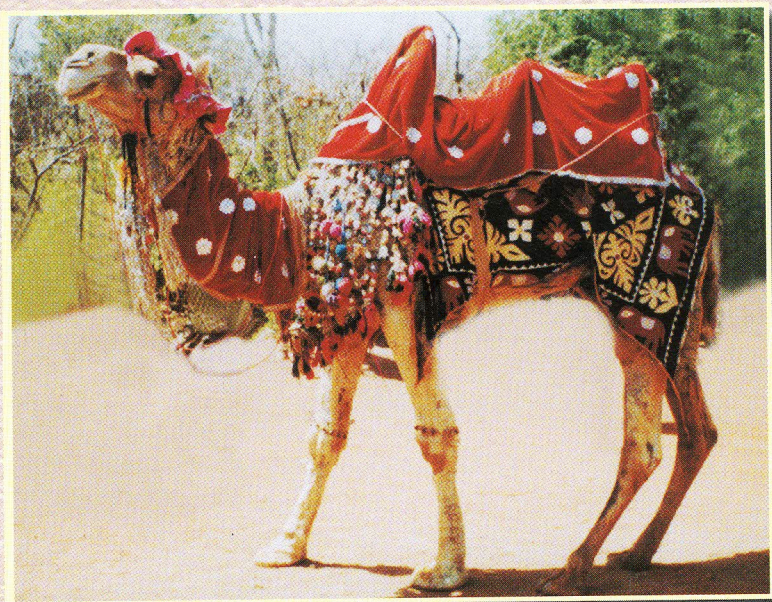
# MEWARI CAMEL IN THE BREEDING TRACT

“A BREED DESCRIPTOR”

(A DEPARTMENT OF BIO-TECHNOLOGY PROJECT)

PRINCIPAL INVESTIGATOR OF COOPERATING CENTRE

**DR. S.C. MEHTA**



**NATIONAL RESEARCH CENTRE ON CAMEL**

(INDIAN COUNCIL OF AGRICULTURAL RESEARCH)

**BIKANER - 334 001 (RAJASTHAN)**

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A DIGITIZED INVENTORY OF ANIMAL  
BIO-RECOUSES: CAMEL GENETIC RESOURCES



BY

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## FOREWORD

Conservation of livestock species is of outmost importance due to mechanisation leading to severe reduction in the number of draught animals and emphasis on production leading to inbreeding in poultry and livestock species.

Camel is well known for its adaptability and draught potential in the hot arid region of our country. In common men's mind camel and desert are very closely associated but very few people know that there exists fair population of the camel in the hilly tracts of Mewar area. Information on its characteristics, utility and production aspects and adaptability can be useful for future selection and conservation of camel breeds.

National Research Centre on Camel, Bikaner is entrusted with responsibility to undertake basic and applied research on the camel breeds of this country. Though the project was focused on the present status of the breed but sincere efforts were made by the Project Investigator and his team to collect various data to characterize this breed in its native tract and to know the socioeconomic conditions of the camel breeders of this tract along with the major health and management problems associated with the camel herds.

I believe this publication will be useful to field veterinarians, teachers, students, farmers / common men to know about the Mewari breed of camel and also for the policy makers, planner and researchers to prepare future strategies for its conservation and improvement.



M.S. Sahani

## PREFACE

Our country is one among the mega bio-diversity centres of the world due to the existence of a variety of livestock species in good number. Camel is one such species of the domestic animals in which India has a greater say in the entire world. The camel population of the world is 19.32 million of which 1.03 million inhabits India. Among the Indian states, Rajasthan ranks first with a population of about 0.668 million.

Characterisation and conservation of livestock species require proper documentation right from defining of the breeding tract and its environmental features to the physical characteristics and production potential of the breed. The availability of the breeding males of the breed in a particular location and their distribution in the entire tract is of outmost importance. Designing of suitable conservation and improvement strategy requires the knowledge of population of a particular breed and extent of crossbreeding in the tract.

Taking such an initiative in a scarcely investigated breed of camel was very much interesting. In my opinion the execution of the project work was excellent and the entire credit goes to the wholehearted support received from Joint Director (AH) Dr.R.P.Vashisht, Deputy Director Dr.B.K.Bajpai, Assistant Director Dr.S.S.Goswami and the senior veterinary officers & ground level managers Dr. Bhupendra Bhardwaj, Dr.Sharad Arora and Dr. Chandrashekhar Bhatnagar.

Sincere thanks are due to the Department of Biotechnology for providing funds for the project and to the Director, National Research Centre on Camel, Bikaner and Director, National Bureau of Animal Genetic Resources, Karnal for providing necessary cooperation and guidance.

  
S.C.Mehta

## MEWARI CAMEL

Mewari breed is one of the important indigenous breeds of camel commonly found in South Rajasthan and adjoining *Malwa* area of Madhya Pradesh.

### Habitat and Distribution

The major breeding tract of the breed encompasses the Udaipur, Chittorgarh, Rajsamand districts and adjoining Neemuch and Mandsour districts of Madhya Pradesh. The camels of this breed can also be seen in Bhilwara, Banswara, Dundarpur districts and *Hadoti* region of Rajasthan, which can be considered as minor breeding tract of the breed (Fig.1). The breeding tract extends in east from 73°02' to 77°20' longitude and in north from 22°55' to 25°46' latitude with fairly good vegetation and rainfall. Average height from main sea level is about 575 meters. The tract consists of hills of the Aravali in *Mewar* area. The population of Mewari breed is estimated to be about 0.025 millions (based on 1997 livestock census, Government of Rajasthan) in the major breeding tract.

### Features

Mewari camels are stouter and a little shorter than Bikaneri. They have strong hindquarters, heavy legs, hard and thick foot pads. Well adapted to travel and carry loads across hills. The body hairs are coarse, which protects them from the bites of wild honeybees and insects. The body colour varies from light brown to dark brown but some animals are almost white in colour, such variation in body colour is generally not seen in other breeds of camel. The head is heavy, set on a thick neck. Unlike the Bikaneri camel, the Mewari camel has no 'stop', but its muzzle is loose. Ears are thick and short, set well apart, tail is long and thick. The milk vein is prominent and the udder is well developed in females.

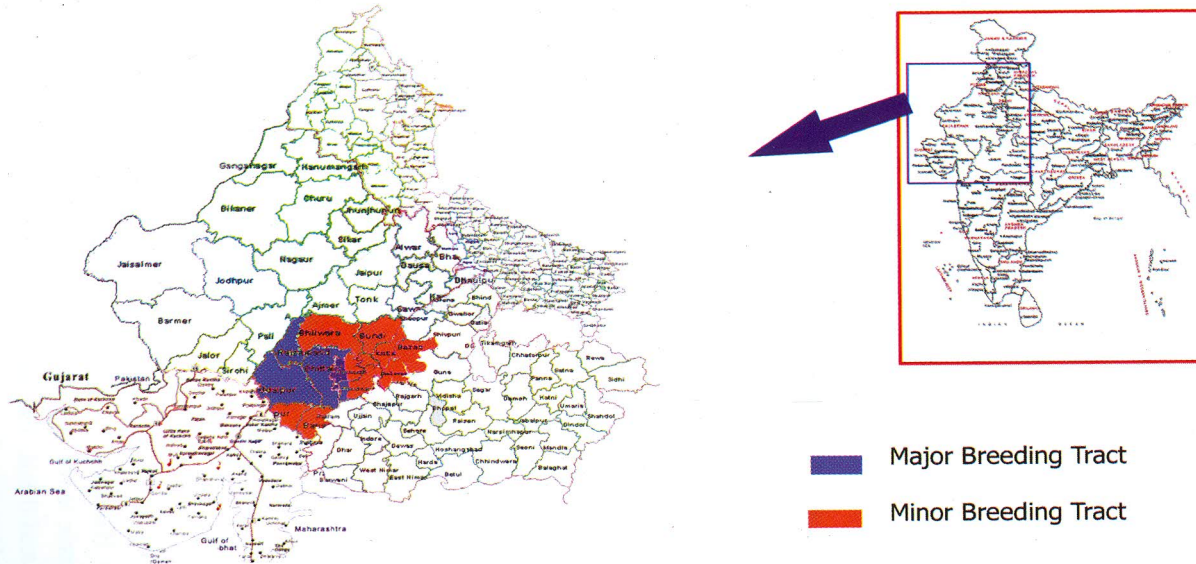


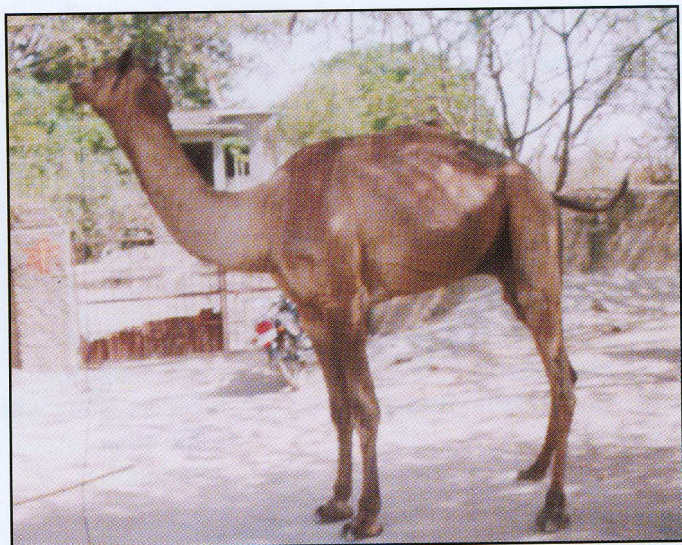
Figure 1: Breeding Tract of Mewari Camel

# BREED DESCRIPTOR

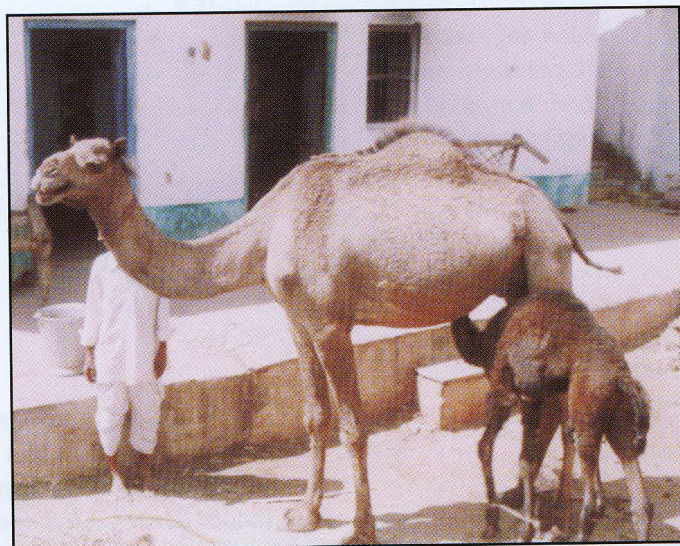
## A. GENERAL DESCRIPTION

1. **Name of the breed** : **Mewari**
2. **Synonyms** : Mewari, Malvi
3. **Species** : Camel  
(*Camelus dromedarius*)
4. **Background for such name** : Named after the habitat: Mewar
5. **Since when breed is known** : Since long
6. **Communities responsible for breeding/rearing** : Rebaris are the traditional camel breeders along with some other communities.
7. **Native environment**
  - a. *Soil description* : Mixed red & black soil
  - c. *Mean minimum temperature-summer* : 28.8° C
  - d. *Mean maximum temperature-summer* : 38.3° C
  - c. *Mean minimum temperature-winter* : 11.6° C
  - d. *Mean maximum temperature-winter* : 28.8° C
  - e. *Mean relative humidity* : 59%
  - f. *Annual rain fall* : 610 mm.
8. **Feed and Fodder**
  - a. *Dry feeds* : Wheat straw (*Tritium aestivum*), Maize straw (*Zea mays*), fodder of locally grown leguminous crops, Groundnut fodder (*Arachis hypogea*), Chana (*Cicer arietinum*) etc.





**Fig. 2 Adult Male**



**Fig. 3 Adult Female**

- b. *Green fodder* : Lucerne (*Medicago sativa*)  
 Barseem (*Tripholium alexandrium*),  
 Methi (*Trigonella foenum-graecum*),  
 Bajra (*Pennisetum typhoideum*),  
 Jowar (*Sorghum vulgare*) and Jai.
- c. *Grasses* : Bhurat (*Cenchrus catharticus*),  
 Bhangta (*Aluda mutica*), Baroo  
 (*Sorghum helipense*), Aujun  
 (*Cenchrus ciliaris*), Doob (*Cynodon  
 dactylon*), Munj (*Saccharum munje*).
- e. *Bushes* : Ber (*Zizyphus mauritiana*), Ghat-ber  
 (*Zizyphus xylopyra*).
- f. *Trees* : Khejri (*Prosopis cineraria*)  
 Babool (*Acacia arabica*), Israili  
 babool (*Acacia tortilis*), Neem  
 (*Azadirachta indica*), Dhavra  
 (*Anogeissus latifolia*), Kher etc.
- g. *Others* : Sweet oil (Groundnut, Mustard,  
 Sesame, Linseed), Gur and common  
 salt.

## 9. Housing

- |                       |   |        |
|-----------------------|---|--------|
| a. During nights only | : | Mostly |
| b. Day and night      | : | None   |
| c. Housed in kutchha  | : | Mostly |
| d. Housed in pukka    | : | None   |
| e. Open house         | : | Mostly |
| f. Closed type house  | : | None   |

## 10. Management

|                    |   |      |
|--------------------|---|------|
| Semi-intensive (%) | : | 12.5 |
| Extensive (%)      | : | 87.5 |

11. **Mating method** : Natural service only  
 (Breeding season :  
 December to February)

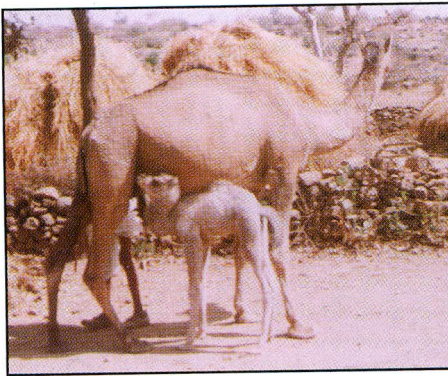


Fig.4 Newly born calf with mother

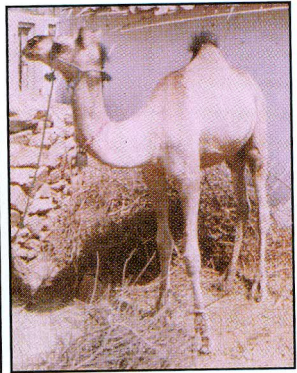


Fig.5 Male adolescent

## B. PHYSICAL CHARACTERISTICS

|   | Male    | Female |
|---|---------|--------|
| 1. Coat color                                     |         |        |
| a. Very Light brown (%)                           | : 07.14 | 06.67  |
| b. Light Brown (%)                                | : 42.86 | 44.00  |
| c. Deep Brown (%)                                 | : 50.00 | 49.33  |
| 2. Hair on ears and eye lid (Jheépra)             |         |        |
| a. Absent (%)                                     | : 100.0 | 100.0  |
| 3. Hair length                                    |         |        |
| a. Small (%)                                      | : 57.14 | 21.33  |
| b. Medium (%)                                     | : 32.14 | 46.66  |
| c. Large (%)                                      | : 10.71 | 32.00  |
| 4. Head   |         |        |
| i. Size   |         |        |
| a. Small (%)                                      | : 53.57 | 20.00  |
| b. Medium (%)                                     | : 42.86 | 77.33  |
| c. Large (%)                                      | : 03.57 | 02.67  |
| ii. Stop ( Well marked depression above the eyes) |         |        |
| a. Absent (%)                                     | : 100   | 100    |

|      |                              |               |                     |
|------|------------------------------|---------------|---------------------|
| iii. | Fore head                    |               |                     |
|      | a. Normal (%)                | : 100         | 100                 |
|      | b. Prominent (%)             | : 00.00       | 00.00               |
| iv.  | Supra-orbital fossa          | : Normal      | Normal              |
| v.   | Muzzle                       |               |                     |
|      | a. Type                      | : Loose       |                     |
|      | b. Lips.                     | : Droopy      |                     |
| 5.   | Body size                    |               |                     |
|      | a. Small (%)                 | : 60.71       | 24.00               |
|      | b. Medium (%)                | : 25.00       | 56.00               |
|      | c. Large (%)                 | : 14.28       | 20.00               |
| 6.   | Chest pad                    | :             | Developed Developed |
| 7.   | Hump size                    |               |                     |
|      | a. Small (%)                 | : 71.43       | 41.33               |
|      | b. Medium (%)                | : 28.57       | 45.33               |
|      | c. Large (%)                 | : 00.00       | 13.33               |
| 8.   | Udder                        |               |                     |
|      | a. Round (%)                 | : -           | 96.23               |
|      | b. Pendulous (%)             | : -           | 03.77               |
| 9.   | Milk vein                    |               |                     |
|      | a. Small (%)                 | : -           | 32.08               |
|      | b. <i>Medium</i> (%)         | : -           | 67.92               |
| 10.  | Temperament                  |               |                     |
|      | a. Active (%)                | : 90.90       | 87.50               |
|      | b. Dull (%)                  | : 09.10       | 12.50               |
| 11.  | Biometry of adult camel (cm) |               |                     |
|      | (i) Heart girth              | : 203.60±7.72 | 192.69±2.39         |
|      | (ii) Body length             | : 160.40±4.28 | 157.54±1.33         |
|      | (iii) Height at wither       | : 207.80±2.93 | 191.58± 0.91        |
|      | (iv) Length of tail          | : 62.20±2.74  | 57.80± 0.85         |

|                                |               |              |
|--------------------------------|---------------|--------------|
| (v) Length of neck             | : 108.20±3.93 | 106.42±1.22  |
| (vi) Distance between eyes     | : 18.60±0.71  | 17.98±0.22   |
| (vii) Length of ears           | : 12.60±0.38  | 12.13±0.12   |
| (viii) Distance between ears   | : 19.80±0.92  | 18.92±0.28   |
| (ix) Length of face            | : 50.80±1.50  | 45.37±0.46   |
| (x) Circumference of hum (H/V) | : 87.00/42.60 | 106.40/50.90 |
| (xi) Length of fore leg        | : 156.00±2.77 | 142.71±0.86  |
| (xii) Length of hind leg       | : 167.00±2.90 | 155.19±0.90  |
| (xiii) Foot pad H/V            |               |              |
| a. Fore                        | : 20.80/22.40 | 20.30/22.00  |
| b. Hind                        | : 19.60/21.10 | 18.00/19.10  |

### C. PERFORMANCE

|                             |   |      |              |
|-----------------------------|---|------|--------------|
| 1. Draught                  | : | Fair | Fair         |
| 2. Dairy performance        | : |      |              |
| a. Daily milk yield         | : | -    | 2-7 liters.  |
| b. Lactation length         | : | -    | 14-16 months |
| 3. Hair production (Annual) | : | NA   | NA           |

### D. REPRODUCTION

|                        |   |             |             |
|------------------------|---|-------------|-------------|
| 1. Age at puberty      | : | 5.5-6 years | 4.5-5 years |
| 2. Age at first estrus | : | -           | 4-4.5 years |
| 3. Age at first mating | : | 6-6.5 years | 4.5-5 years |

### E. OTHER INFORMATION

|                        |   |       |
|------------------------|---|-------|
| 1. Water sources       |   |       |
| a. Tube well/ Well (%) | : | 100   |
| 2. Fodder Production   |   |       |
| a. Yes (%)             | : | 37.50 |
| b. No (%)              | : | 62.50 |

3. Feeding  
 a. Mixed Fodder (%) : 100
4. Uses  
 a. Multipurpose (%) : 100

### Average land holding

| District       | Tehsil    | Land holding (Hectare) |           |              |
|----------------|-----------|------------------------|-----------|--------------|
|                |           | Overall                | Irrigated | Un-irrigated |
| Breeding tract | Pooled    | 6.25                   | 0.25      | 6.00         |
| Udaipur        | Girva     | 2.50                   | -         | 2.50         |
|                | Kurabad   | 12.50                  | -         | 12.50        |
| Rajsamand      | Nathdwara | 10.17                  | 0.67      | 9.50         |
| Chittorgarh    | Nathdwara | 1.00                   | -         | 1.00         |

The agricultural land in this region is fertile and the important crops are Maize, Jowar, Pulses, Sesame, Groundnut, Sugarcane, Wheat, Gram and Barley. A few years back the irrigation was mainly through rivers and open wells but in last ten years or so the situation has changed drastically. There were severe consecutive droughts leading to drying of rivers and open wells. The water table has gone down seriously. The irrigation became dependent on the tube wells which is a little costly affair and further the failure of tube wells is not uncommon in the *Mewar* and *Malva* regions. This environmental change has altered the irrigation status in this region (Fig. 6).

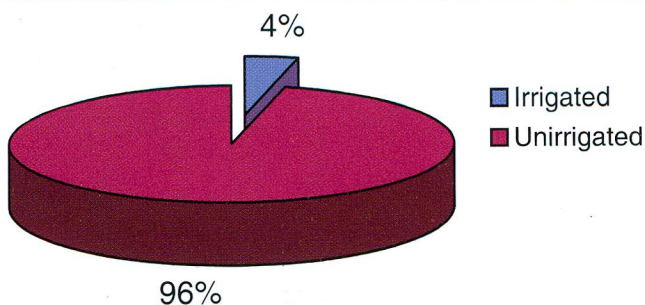


Fig. 6: Average land holding with irrigation status

### District and Tehsil wise grazing distance and grazing time

| District    | Tehsil      | Grazing distance (Km) | Grazing time (Hrs.) |
|-------------|-------------|-----------------------|---------------------|
|             | Pooled      | 4.8                   | 8.9                 |
| Udaipur     | Girva       | 5.0                   | 10.0                |
|             | Kurabad     | 5.0                   | 8.0                 |
| Rajsamand   | Nathdwara   | 4.3                   | 7.7                 |
| Chittorgarh | Chittorgarh | 5.0                   | 10.0                |

The distance between the villages in the *Mewar* and *Malwa* regions is less as compared to that in the western Rajasthan. The camels go out for grazing in the hills, on the road sides and in the harvested fields. The average grazing distance is about 5 km and average grazing time is about 9 hours. Babool, Neem, Dhavra, Kher, Rujda are the trees generally seen on such sites. Camel accepts almost all types of grasses that are available to it. Among the green fodders, Lucerne and Methi are offered more frequently than others. The camel owners offer sweet oil which can be of Mustard, Groundnut, Sesame or Linseed. Offering of salt is a common practice. A few camel owners also offer concentrated feed in the form of feed pellets to the female camels in milk. The

quantity and frequency of offering sweet oil, salt, concentrated feed and green fodder not only depends on the know-how and economic status of the farmer but also on the physiological state of the individual animal and economic returns expected out of it.

### Occupation wise income

| Occupation                      | Percent Occupation | Income (Rs.) |
|---------------------------------|--------------------|--------------|
| Animal husbandry                | 25                 | 50000        |
| Agricultural & Animal husbandry | 75                 | 26667        |

### District and Tehsil wise average Annual Income and Family size

| District       | Tehsil      | Income (Rs.) | Family Size |
|----------------|-------------|--------------|-------------|
| Breeding tract | Pooled      | 32500        | 6.75        |
| Udaipur        | Girva       | 15000        | 6           |
|                | Kurabad     | 40000        | 10          |
| Rajsamand      | Nathdwara   | 30000        | 5           |
| Chittorgarh    | Chittorgarh | 50000        | 8.5         |

### Status of Mewari Camel in the Breeding Tract

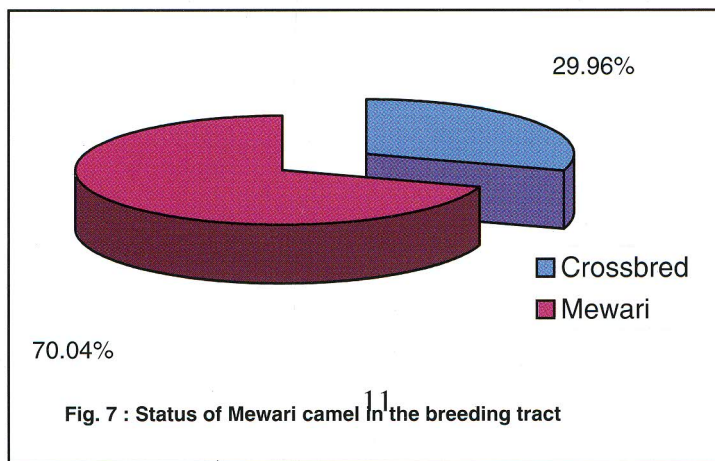
Characterisation is an integral part of the conservation because only after proper characterisation the availability of breeding males, females and the population of a breed can be estimated. The major breeding tract of Mewari camel was surveyed and it was observed that some herds have clear inheritance of Bikaneri blood (Fig. 7). The major source of breeding males for the breeders of Mewari camel is *Pushkar* fair which is invariably attended by most of the camel keepers of Rajasthan and adjoining states. The experience of camel breeders indicate that calves born out of Bikaneri / Marwari



males face difficulty in climbing and walking across hilly terrains.

| District    | Camel Population* | Tehsil      | Camels surveyed | Mewari |                 |                   |
|-------------|-------------------|-------------|-----------------|--------|-----------------|-------------------|
|             |                   |             |                 | Camels | Breedable Males | Breedable Females |
| Udaipur     | 9413              | Girva       | 41              | 41     | 1               | 26                |
|             |                   | Kurabad     | 9               | 9      | 2               | 4                 |
| Rajsamand   | 4688              | Nathdwara   | 46              | 46     | 5               | 22                |
| Chittorgarh | 6139              | Chittorgarh | 141             | 70     | 0               | 30                |
| Total       | 20240             | 4           | 237             | 166    | 8               | 82                |

\*as per Livestock Census 1997



In the present survey the ratio of breedable males to females was satisfactory and the breedable males were about 3.38% to the total camel population (Fig. 8) but some of the herds of the Mewari breed were not having even a single Mewari stud for breeding. This situation is not congenial for conservation and propagation of the breed.

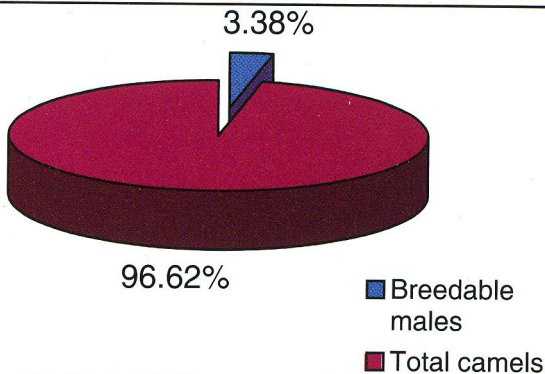


Fig. 8 : Availability of breedable males

Table 1(a). Leastsquares Mean of Body Measurements of Mewari Camel

| Traits/ Effects | Body length     | Heart girth      | Height at wither | Neck length     | Leg length (F)  | Leg length (H)  |
|-----------------|-----------------|------------------|------------------|-----------------|-----------------|-----------------|
| Over all mean   | 131.85±<br>2.45 | 163.82±<br>3.29  | 172.52±<br>2.23  | 84.69±<br>1.95  | 133.02±<br>1.58 | 143.60±<br>1.79 |
| Sex             | NS              | NS               | NS               | NS              | NS              | NS              |
| Male            | 133.65±<br>3.63 | 166.77±<br>4.87  | 174.11±<br>3.30  | 84.02±<br>2.88  | 135.53±<br>2.34 | 145.95±<br>2.65 |
| Female          | 130.06±<br>2.66 | 160.87±<br>3.56  | 170.93±<br>2.42  | 85.36±<br>2.11  | 130.51±<br>1.71 | 141.25±<br>1.94 |
| Age             | **              | **               | **               | **              | **              | **              |
| 1 Year          | 97.36±<br>3.26  | 126.46±<br>4.37  | 143.39±<br>2.97  | 60.85±<br>2.58  | 110.18±<br>2.10 | 119.13±<br>2.38 |
| 2 Years         | 124.73±<br>4.44 | 159.18±<br>5.95  | 172.30±<br>4.04  | 77.06±<br>3.52  | 131.41±<br>2.86 | 141.72±<br>3.25 |
| 3 Years         | 131.44±<br>5.19 | 163.75±<br>6.96  | 170.66±<br>4.72  | 81.52±<br>4.11  | 134.73±<br>3.35 | 144.97±<br>3.79 |
| 4 Years         | 146.46±<br>9.0  | 173.62±<br>12.07 | 181.93±<br>8.19  | 98.00±<br>7.14  | 142.84±<br>5.81 | 154.02±<br>6.58 |
| 5 Years         | 159.27±<br>2.61 | 196.08±<br>3.50  | 194.31±<br>2.38  | 106.03±<br>2.07 | 145.94±<br>1.69 | 158.17±<br>1.91 |

\*(P<0.05) \*\*(P<0.01) NS- Non significant

**Table 1(b) : Leastsquares Mean of Body Measurements of Mewari Camel**

| Traits/<br>Effects | Foot<br>pad<br>length<br>(F) | Foot<br>pad<br>Width<br>(F) | Foot<br>pad<br>length<br>(H) | Foot pad<br>Width<br>(H) | Hump<br>Circum<br>(H) | Hump<br>Circum<br>(V) |
|--------------------|------------------------------|-----------------------------|------------------------------|--------------------------|-----------------------|-----------------------|
| Over all<br>mean   | 17.21±<br>0.39               | 18.80±<br>0.38              | 15.57±<br>0.36               | 16.75±<br>0.39           | 85.81±<br>3.73        | 41.58±<br>1.98        |
| Sex                | NS                           | *                           | NS                           | NS                       | *                     | NS                    |
| Male               | 17.23±<br>0.57               | 19.06±<br>0.56              | 15.69±<br>0.53               | 16.97±<br>0.58           | 79.61±<br>5.51        | 38.52±<br>2.92        |
| Female             | 17.20±<br>0.42               | 18.54±<br>0.41              | 15.46±<br>0.39               | 16.53±<br>0.43           | 92.01±<br>4.04        | 44.64±<br>2.14        |
| Age                | **                           | **                          | **                           | **                       | **                    | **                    |
| 1 Year             | 12.59±<br>0.52               | 13.95±<br>0.50              | 11.71±<br>0.48               | 12.69±<br>0.52           | 66.40±<br>4.95        | 32.83±<br>2.63        |
| 2 Years            | 17.99±<br>0.70               | 18.91±<br>0.68              | 15.39±<br>0.65               | 16.51±<br>0.71           | 89.44±<br>6.74        | 40.52±<br>3.57        |
| 3 Years            | 17.12±<br>0.82               | 18.25±<br>0.80              | 15.06±<br>0.76               | 16.23±<br>0.83           | 82.22±<br>7.88        | 41.30±<br>4.18        |
| 4 Years            | 18.02±<br>1.42               | 20.60±<br>1.38              | 17.45±<br>1.32               | 18.89±<br>1.44           | 91.47±<br>13.67       | 45.61±<br>7.25        |
| 5 Years            | 20.35±<br>0.41               | 22.29±<br>0.40              | 18.25±<br>0.39               | 19.45±<br>0.42           | 99.55±<br>3.97        | 47.63±<br>2.11        |

NS- Nonsignificant, \*(P<0.05) and \*\*(P<0.01)

### Utility and Economic aspects

**Draught:** Mewari camels have multipurpose utility but camels of this breed are mainly classified as milch animals and baggage type. Both male and female can climb with loads on hilly and stony land. Males are good baggage animals on hard land.

**Table 1(c): Leastsquares Mean of Body Measurements of Mewari Camel**

| Traits/<br>Effects | Face length    | Distance<br>between eyes | Distance<br>between ears | Ear length  | Tail length |
|--------------------|----------------|--------------------------|--------------------------|-------------|-------------|
| Over all<br>Mean   | 40.55±<br>0.65 | 15.84±<br>0.32           | 15.68± 0.37              | 10.60± 0.17 | 50.32± 1.31 |
| Sex                | NS             | NS                       | NS                       | NS          | NS          |
| Male               | 40.95±<br>0.96 | 15.82±<br>0.48           | 15.85±0.54               | 10.59±0.26  | 50.85±1.94  |
| Female             | 40.16±<br>0.70 | 15.86±<br>0.35           | 15.52±0.40               | 10.64±0.19  | 49.76±1.42  |
| Age**              | **             | **                       | **                       | **          | **          |
| 1 Year             | 32.34±<br>0.86 | 13.41±<br>0.43           | 13.11±0.49               | 9.42±0.23   | 40.86±1.74  |
| 2 Years            | 40.20±<br>1.17 | 15.60±<br>0.58           | 14.70±0.66               | 10.85±0.32  | 50.49±2.37  |
| 3 Years            | 40.00±<br>1.37 | 15.21±<br>0.68           | 16.32±0.78               | 10.64±0.37  | 47.41±2.77  |
| 4 Years            | 44.07±<br>2.38 | 16.98±<br>1.18           | 15.17±1.35               | 9.96±0.64   | 54.20±4.80  |
| 5 Years            | 46.17±<br>0.70 | 18.02±<br>0.34           | 19.14±0.40               | 12.14±0.19  | 58.64±1.39  |

NS- Nonsignificant, \*(P<0.05) and \*\*(P<0.01)

**Camel carts:** Camel carts in this area are generally confined to the transportation in the mining area. Short distance transportation of bricks and other raw materials is done to a very limited extent. Camel carts act as a source of livelihood for landless and poor farmers especially during drought and lean period.

**Milk:** Milk of Mewari breed of camel is a main source of income to their breeders. Female camels are good producer of milk. Camel milk is used for human consumption in Udaipur

and adjoining areas. Generally it is used in the preparation of tea and coffee. A female can give 5-7 kg milk daily. According to the survey, about 80 quintals of camel milk is being sold daily @ 6-10/- per kg for human consumption in Udaipur and adjoining cities such as Chittorgarh, Nimbahera, Nimach, Ratlam, Jawara, Mandsour etc.

**Hair Production:** Another chief source of income is camel hair. Camel hair is used in making small sized carpets and blankets. Fine quality hair of camel calves is utilized for blankets whereas coarse quality hair of the adults is used for carpets. Some persons in Rajsamand and Jawara are engaged in making of carpets and blankets but this is not their full time job. They charge Rs. 15 per kg for yarn making and Rs. 40 per kg for making carpets and blankets etc. These carpets and blankets are very cheap and durable. The life of a carpet is approximately 50 years and that of a blanket is 15 years. Camel hairs are also used in making ropes, which are subsequently used for tying the animals and in making cots.



Fig.9 Weaving yarn from camel hair



Fig.10 Weavers with camel hair  
and cotton blanket, carpet

### Disease aspect

The major clinical problem exhibited by the camel owners of the breeding tract was that of Trypanosomiasis. Almost all camel keepers try to go for prophylactic treatment of this disease. Mange was second cause of worry to the camel breeders having small and medium size herds. Indigestion, ectoparasites, diarrhoea and pneumonia were the other health problems associated with camel in the tract.

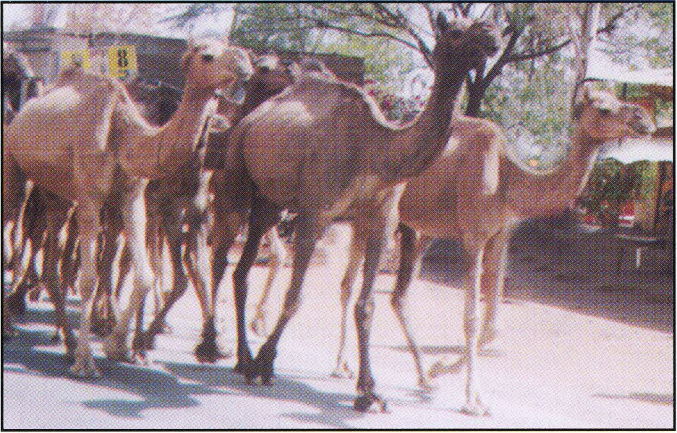
## **Mewari Camels in Mewat Area**

Mewat area of Rajasthan i.e. Alwar, Bharatpur and adjoining parts of western Uttar Pradesh, has some camel population. Total camel population according to livestock census-1997 in Alwar is 20343 (rural), 117(urban) and total of 20,460 camels whereas in Bharatpur 6745(rural), 637(urban) and a total of 7382 camels. There are 30-35 *Dhanis* / villages of Rebari caste in Alwar and Bharatpur districts. Important among them are Tehla, Satawat, Rajpur, Gaver, Machadi, Asanpur, Reni, Jhamdoli, Digdigo, Dig, Bayana and Vair villages. The camel breeders have shifted to this area due to the availability of dense forest and green vegetation. *Rebaris*, the traditional camel breeders in Mewat area, prefer Mewari females as they are good producer of milk and are well adapted to the hilly tracts. Whereas the *Mev* (Muslims) camel users prefer Bikaneri camels because they are engaged in transportation of goods and Bikaneri camel has good draught potential.

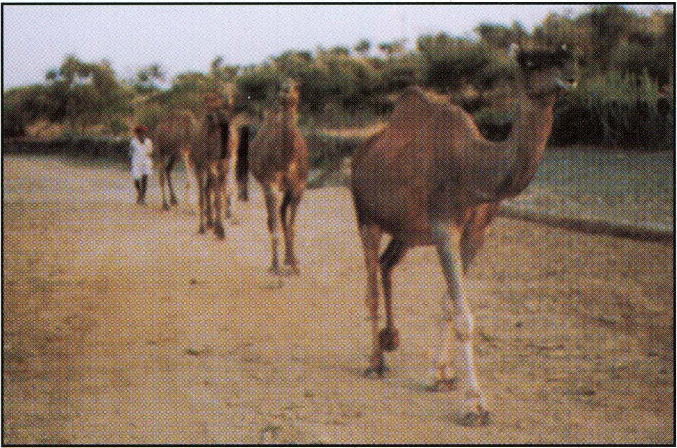
### **Scope for improvement**

In addition to the primary utility of the camel for draught in the arid and semi arid region, the camel milk was being sold in this part of the country for human consumption much earlier than the year 1978 when first case of selling camel milk was registered against a camel milk vendor in Udaipur. It is from this land, the "Mewar", a team consisting of the camel milk vendor, veterinary officers, NGOs, learned counsel and the National Research Centre on Camel raised the voice of legalizing the sale of camel milk for human consumption, which was ultimately accepted by the honourable Supreme Court of India in the year 2000.

In view of the long lactation length and the production cost of camel milk there is need for improvement in the milk production potential of the camel in this area. An integrated rotational grazing forest / silvi pasture development programme along with a disease control and breed improvement programme can be of great use in maintaining the Mewari camel with diverse livestock species under optimum production.



मेवाड़ी ऊँटों का समुह



मेवाड़ी ऊँटों के प्रजनन क्षेत्र का एक मनोरम दृश्य

## मेवाड़ी ऊँट

मेवाड़ी नस्ल के ऊँट दक्षिणी राजस्थान के उदयपुर, चित्तौड़गढ़ एवं राजसमन्द जिलों में तथा सीमावर्ती मध्यप्रदेश के जिलों जैसे नीमच, मन्दसौर आदि में मुख्य रूप से पाये जाते हैं। इस नस्ल के ऊँट डूंगरपुर, भीलवाड़ा, बांसवाड़ा एवं हड़ौती संभाग में भी पाये जाते हैं। इस प्रकार इस नस्ल का प्रजनन क्षेत्र पूर्व में 73°02' से 77°20' देशान्तर तक एवं उत्तर में 22°55' से 25°46' अक्षांश तक फैला हुआ है। इस क्षेत्र में सामान्य वर्षा होती है एवं पर्याप्त मात्रा में हरियाली पाई जाती है। यह क्षेत्र समुद्र तल से लगभग 575 मीटर की ऊँचाई पर है एवं यह अरावली पर्वतमाला का प्रमुख अंग है। वर्ष 1997 में हुई पशुगणना के आधार पर देश में इस नस्ल के लगभग 25 हजार ऊँट हैं।

मेवाड़ी ऊँट कद में थोड़े छोटे एवं गठिले होते हैं। इनका पृष्ठ भाग बहुत मजबूत होता है एवं पीछे के पैर भारी होते हैं। पैरों का तला सख्त होता है, इस प्रकार यह नस्ल पहाड़ों पर आने-जाने एवं सामान लाने ले जाने के लिए पूर्णरूप से अनुकूलित है। इसके शरीर पर दूसरी नस्ल के ऊँटों की तुलना में बाल अधिक मात्रा में पाये जाते हैं, जो कि इनका मधुमक्खियों एवं अन्य कीड़ों से बचाव करते हैं। इस नस्ल के ऊँट हल्के भूरे से गहरे भूरे रंग के होते हैं एवं कुछ ऊँट सफेद रंग के भी होते हैं। सफेद रंग के ऊँट सामान्यतया अन्य किसी भी नस्ल में नहीं पाये जाते हैं। इनका सिर भारी होता है, लेकिन बीकानेर नस्ल की तरह इनमें 'स्टॉप' नहीं होता है। इसका थूथन ढीला होता है एवं निचला होठ अधिकांश ऊँटों में लटका हुआ होता है। कान मोटे लेकिन छोटे होते हैं। कानों पर बीकानेरी नस्ल की तरह अधिक बाल (झीपरा) नहीं पाये जाते हैं। इनकी गर्दन भारी होती है। पूंछ लम्बी एवं मोटी होती है। मेवाड़ी नस्ल की मादाओं के थन भारी होते हैं एवं दुग्ध शिरा पूर्ण विकसित होती है।



मेवाड़ी नस्ल की वर्तमान स्थिति का अध्ययन करने से यह पता चला कि बीकानेरी नस्ल के ऊँटों का उपयोग प्रजनन के लिए इस क्षेत्र में भी किया गया। अध्ययन के समय लगभग 30 प्रतिशत ऊँट ऐसे पाये गये जिनमें बीकानेरी एवं मेवाड़ी दोनों नस्लों के गुण थे। प्रजनन योग्य नर ऊँटों की संख्या 3.38 प्रतिशत पाई गई जो कि संतोषजनक है लेकिन कुछ अच्छे मेवाड़ी नस्ल के झूण्ड में एक भी नर ऊँट मेवाड़ी नस्ल का प्रजनन के लिए उपलब्ध नहीं था, उक्त स्थिति नस्ल संरक्षण के लिये उपयुक्त नहीं कही जा सकती है।

मेवाड़ी नस्ल के नर एवं मादा ऊँट पहाड़ी एवं पथरीले क्षेत्र में बोझ ढोने के लिये उपयुक्त हैं। नर ऊँट इस क्षेत्र में अधिक कुशलता से बोझ ढो लेता है। इस क्षेत्र में ऊँट गाड़े का अधिक प्रचलन नहीं है। कुछ ऊँट गाड़े पत्थर की खदानों में एवं कुछ अन्य कम दूरी के लिये सामान लाने ले जाने के काम आते हैं। मेवाड़ी नस्ल के ऊँटों के बालों का पुरा उपयोग किया जाता है। छोटे बच्चे के बालों से कम्बल बनाये जाते हैं जबकि वयस्क ऊँटों के बालों से गलीचा एवं रस्से बनाये जाते हैं। कुछ ग्रामीण 15 रुपये प्रति किलोग्राम के हिसाब से इसका धागा एवं 40 रुपये प्रति किलोग्राम के हिसाब से गलीचा अथवा कम्बल बनाते हैं। ऊँट के बालों से निर्मित कम्बल की उम्र लगभग 15 वर्ष एवं गलीचे की लगभग 50 वर्ष मानी जाती है।

मेवाड़ी ऊँट इस क्षेत्र में मुख्य रूप से दुग्ध उत्पादन के लिये पाले जाते हैं। सामान्यतया एक ऊँटनी 5-7 लीटर तक दूध देती है एवं यह 6-10 रुपये प्रति लीटर के हिसाब से बिकता है। यह दूध चाय एवं कॉफी बनाने के काम आता है। इस क्षेत्र में उष्ट्र विकास के लिये नस्ल सुधार, चारागाह के विकास एवं बीमारियों की रोकथाम के समन्वित प्रयास की आवश्यकता है।

