

## **Breeding practices and Breeding management of dairy animals Puberty age**

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**Abstract:** Puberty age in different livestock is varied animal to animal, place to place, breed and sex. Puberty is delayed in unhealthy animals, deshi breed and calves undernourished or puberty is dependent on managerial practices. In general the ideal range for puberty in cow calves is 2.0 to 2.5 years in buffalo it is 2.5 to 3.5 years and in male it is 3 and 4 years respectively. On the survey report puberty age of different animals is given in table(1).... The age of first calving in animals were recorded almost same in all four districts The delayed puberty age and delayed age of first calving is not found to be economical to the animal farmers. Better breeding, feeding and

managerial practices can reduce the puberty age as well as age of first calving.

**Keywords:** Breeding , puberty , calving , disinfection , lactation

### **Introduction:**

Breeding is simply selecting the right animals for the next generation. Bringing a cow and bull together will hopefully create an animal that maintains the better traits of its parents, while at the same time improving the poorer traits of its parents. By breeding, farmers can choose which way they want to develop their herd. They can choose different ways to gain results. Bringing this theory into practice is difficult, but possible. There are some tables representing the puberty age and their calving age :

District	Puberty age		Age at first calving
	Male	Female	
Ajmer	2.5-3	2.5-3	3-4
Dausa	3-3.5	3-3.5	3.5-4
Jaipur	3-3.5	3-3.5	3.5-4
Tonk	3-3.5	3.5-4	4-4.5

Table 1:- Puberty age & Age of first calving of cow in different districts

District	Puberty age		Age at first calving
	Male	Female	
Ajmer	4-5	3-4	4-5
Dausa	4-5	3-4	4-5
Jaipur	3-4	3-4	4-5
Tonk	4.5-5.5	4-5	5-6

Table 2:- Puberty age & Age of first calving of buffaloes in different districts

District	Puberty age		Age at first calving
	Male	Female	
Ajmer	12-14 Month	12 Month	18-20 Month
Dausa	12-15 Month	12 Month	18-20 Month
Jaipur	12-15 Month	12 Month	18-20 Month
Tonk	13-15 Month	13 Month	19-20 Month

Table 3:- Puberty age &Age of first calving of Goat in different districts

District	Puberty age		Age at first calving
	Male	Female	
Ajmer	12-14 Month	12 Month	18-20 Month
Dausa	12-15 Month	12 Month	18-20 Month
Jaipur	12-15 Month	12 Month	18-20 Month
Tonk	13-15 Month	13 Month	19-20 Month

Table 4:- Puberty age &Age of first calving of Sheep in different districts

District	Puberty age		Age at first calving
	Male	Female	
Ajmer	3-4 Years	3 Years	4.5-5 Years
Dausa	3-4 Years	3 Years	4.5-5 Years
Jaipur	3-4 Years	3 Years	4.5-5 Years
Tonk	3-4 Years	3 Years	4.5-5 Years

Table 5:- Puberty age &Age of first calving of Camel in different districts

### Season of calving

Farm animals are comes in heat through out the year and calving do occurs through out the year. But the heat is generally influenced by temperature, climate, weather and nutrition. In the survey area the most common period of heat is December to February and thus the calving period most commonly found in the month of August to October. The nature had provided the facility that the pregnant animals get plenty of green during the last trimester of pregnancy which directly affects the production. In Jaipur and Dausa district a

good percentage of calving was also recorded from Oct- Dec. only due to availability of water and green fodder.

### Housing

In zone IIIA two types of housing is mainly observed, as the livestock owners mainly engaged in milk marketing business keep their animals in closed confined premises having about 2/3<sup>rd</sup> open area and 1/3<sup>rd</sup> partially covered area. The open area has got one or more well develop trees whose shade is being utilized during day time Both covered and open areas are being

provided with feed and water facilities. In area of Ajmer and Tonk districts the practices of field grazing is very common hence during day time the animal mostly remains outside where as in night are being kept in the shade. The negligible instances of proper drainage system was recorded where as washing and wallowing was recorded at all places either individually or at common facility point just like are pond. The sanitary conditions in sheds were not found to be satisfactory in all places, which is main cause of frequent illness in animals. Various type of shades either Kachhas or Pucca were observed through out the surveyed area with the prime object off protecting animals from direct sun light hot/cold wind waves. No significant variation was recorded in housing pattern of animals in surveyed area.

### **Disposal of farm waste**

Improper farm waste disposal practices were recorded through out the surveyed area. The heaps of daily dung/feed waste could be observed in front of every livestock owner's house. None of the animal owners was found to use pit technique, whereas some of the livestock owners found to utilize this dung as a domestic fuel. Most of the livestock owners either used this dung as fertilizer or the surplus was found to be sold. None of the owner was found to utilize this dung for the purpose of Gobar gas fuel. The urine of the animals was found to be waste and nowhere it was utilized for the purpose of fertilizer as urea source.

### **Disinfection of shed**

Livestock owners are found to be engaged in animal husbandry practices since long as a profession utilizing the same premises, the prolonged stay of animal at particular place helps in accumulation of pathogens and ectoparasites in the soil and in the shed making the animal more prone to the

diseases. Proper disinfection techniques lead to minimize the microflora load in the soil and shed. In most of the surveyed area no disinfection of shed was found, only in the event of disease outbreak the disinfection is being carried out as control measures.

### **Drinking water supply**

The drinking water facilities for the animals were found to be dependent on the supply / availability of water. In area where the water table is high and hand pumps or boring are there, the drinking water facilities were found to be individual basis where as common watering facilities are routinely observed and in certain areas the pond water is being provided to the animals. In areas where the water source was either hand pump or tube well the occurrence of water borne diseases was found to be minimal in comparison to common watering facilities where the parasitic load as well as incidences of infectious diseases were comparatively high.

### **Lactation**

Jaipur region contributes major share of animal milk production but while looking towards the number of animals in the region, milk production is not observed to be at par. The milk production in animals is mainly dependent on the breed, nutrition and the management practices. Mostly animal owners of this area keep unselected type of (Deshi) animals where as Murrah buffalo and Gir cow were found to be first choice of animal owners engaged in milk marketing business. An average milk yield of 4-5 liters was recorded in Ajmer and Dausa districts in Deshi buffaloes were as 5-6 liters per day in Jaipur district and min. avg. yield of 3-4 liters. In Tonk region was recorded (Table 1.1). In case of Murrah buffaloes of Ajmer & Dausa district the average milk production ranges from 8-10 litres where as in Jaipur this range was found to be 10-12 litres and a

minimum of 6-8 litres was recorded in Tonk district.

The lactation length is a period i.e. days during which animal produces milk during that lactation, in Ajmer and Dausa districts the mean lactation length of 180-200 days was observed in deshi animals. Where as in Jaipur district it was 200-220 days and minimum mean lactation length was observed in Tonk district as 150-180 days. In case of murrah buffalo the mean lactation length in Ajmer district was 200-220 days, in Dausa and Jaipur districts it was 210-230 days and in Tonk district it was 180-200 days.

The average milk yield per lactation was found to be 720-1000 litres in deshi buffaloes of Ajmer and Dausa district, 1000-1320 litres in Jaipur district and 450-

720 litres in Tonk district. In case of murrah buffaloes average milk production per lactation in Ajmer district was recorded to be 1600-2200 litres, in Dausa district 1680 - 2300 litres, in Jaipur district 2100-2760 litres and in Tonk district it was found to be 1080-1600litres. The cost of animals are mainly based on the milk production efficiency and the cost of good milch animals were found just double of undescriptive type of animal. Hence the progressive farmers were found to show interest on breed improvement practices adopting SI technique to procure cross bred animals calves from deshiundescript females where the lactation yield is in between the two types but minimizing the purchase cost. Table:-...Mean milk production, lactation length and average milk yield of animals per lactation in zone IIIA.

(a) Milk production

Districts	Average yield per day(Liters)				
	Cow		Buffaloes		Goat
	Descriptive	Non descriptive	Descriptive	Non descriptive	
Ajmer	5-6	2-3	8-10	4-5	1.5-2
Dausa	5-6	2-3	8-10	4-5	1.5-2
Jaipur	5-6	2-3	10-12	5-6	1.5-2
Tonk	5-6	2-3	6-8	3-4	1.5-2

(b) Lactation length

Districts	Lactation length (days)				
	Cow		Buffaloes		Goat
	Descriptive	Non descriptive	Descriptive	Non descriptive	
Ajmer	200-210	180-190	200-220	180-200	200-225
Dausa	200-210	180-190	210-230	180-200	200-225
Jaipur	200-210	180-190	210-230	200-220	200-225
Tonk	200-210	180-190	180-200	150-180	200-225

(c) Average yield per lactation

Districts	Average yield per Lactation (Liters)				
	Cow		Buffaloes		Goat
	Descriptive	Non descriptive	Descriptive	Non descriptive	
Ajmer	1000-1200	400-500	1600-2200	720-1000	300-400
Dausa	1000-1200	400-500	1680-2300	720-1000	300-400
Jaipur	1000-1200	400-500	2100-2760	1000-1320	300-400
Tonk	1000-1200	400-500	1080-1600	450-720	300-400

### Conclusion

Marketing of milk is a managerial skill of animal owners to get maximum price of their produce. Two measure types of marketing of milk was recorded in all the four surveyed districts, as one type includes regular sale of milk at almost fixed rate to the cooperative societies which guaranteed the regular return of the product, where as in other type the sale of milk is carried out in local market, door to door supply or to the sweet shops. This disadvantage of this type is the variation in the price of milk as per demand and supply ratio. Apart from sale of milk very limited number of animal owners were found to be engaged in sale of other milk products like ghee.

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