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## Study on dairy cow body condition score in Puducherry, India

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**Abstract**

A study was conducted to identify the dairy cattle housing management by collecting data from 220 dairy farmers in Puducherry. Out of 451 dairy cows, 81.6 per cent of dairy cows had a body condition score of 3. This indicated that most of the cows in Puducherry region were having frame and covering well, high producing, but body fat may not be enough for peak production.

**Keywords:** Body condition score, Puducherry, Milch cow

**Introduction**

Puducherry is one of the few states where the per capita availability of milk was lower than the recommended level of 300 grams per day. To satisfy the ICMR recommended level, the total requirement of milk in Puducherry was estimated to be 3.00 lakh kg per day (population is 12 lakhs as per the latest census, 2011). This requirement of milk is partially met through three types of marketing channel viz. Pondicherry Milk Producers' Union Ltd (PONLAIT), private dairies and milk vendors. The PONLAIT is the dominant milk procurement agency in rural areas, whereas, in urban and peri - urban areas, the important milk market channel is through milker cum vendor, who milks the cow, collects the milk at the doorsteps of the cattle owners and supplies it to urban consumers (Ramkumar and Rao, 2001) <sup>[4]</sup>. The important constraints perceived by the farmers in Puducherry region is high cost of commercial feed and low procurement price for milk (NPCBB, 2006) <sup>[2]</sup>.

**Materials and Method**

The Union Territory of Pondicherry has a total area of 480 sq.km comprising four geographically discontinuous regions viz. Puducherry, Karaikal, Mahe and Yanam. The region of Puducherry is administratively divided into two urban municipalities (Puducherry and Ozhukarai) and five rural communes (Ariyankuppam, Bahour, Mannadipet, Nettapakkam and Villianur). The sampling procedure followed for this study was stratified proportionate random sampling. Here, a sample size of n=220 has been determined using the formula  $n = \frac{Z^2pqN}{e^2(N-1) + Z^2pq}$  (Kothari, 2009) <sup>[3]</sup>. The sample size of 220 was randomly distributed based on the population of dairy farmers in each of the communes and municipalities.

**Results and Discussion**

Out of 451 dairy cows, 84.7 per cent of dairy cows had the body condition score of 3. This indicates that most of the cows in Puducherry had frame covering well, high producing, but fat may not be enough for peak milk production. Only 5.5 per cent of total cows were in the category of score 4. This may support for peak milk production but frame not visible and may have more metabolic problems at calving (Table 1).

**Table 1:** Body condition score

Body condition Score	Communes (371)		Municipalities (80)		Total (451)	
	N	%	n	%	n	%
2	34	9.1	10	12.5	44	9.8
3	319	86.0	63	78.8	382	84.7
4	18	4.9	7	8.7	25	5.5

This finding is in line with the result of NDDB (2016) Score 1 for not in good health, Will not milk well or reproduce. Score 2 Health may be good, But milk production low and poor reproduction. Score 3 high producing, but fat may not be enough for peak production. Score 4 - Frame not very visible, may have more metabolic problems at calving.

### **Conclusion**

The knowledge of dairy farmers on dairy farming was low in both rural and urban categories which require different levels of training in the areas like deworming, vaccination, method of milking, feeding methods (chaffing), balanced feeding, scientific knowledge on housing. Training of dairy farmers in hydroponic system of green fodder cultivation to overcome the shortage of green fodder and enhance the production.

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