



Survey on structural details and evaluation of cattle sheds in coastal Odisha

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ABSTRACT : A survey of the existing cattle sheds was taken up in three selected villages of Balasore, Khurda and Cuttack districts of coastal Odisha to collect the information on land holdings, structural details along with number and size of animals kept inside it. Considering different ideal characteristics, an evaluation score card for cattle sheds in tropics was developed. Based on the total score, the sheds were classified to four categories like very good (>25 points), good (21-25 points), satisfactory (15-20 points) and improper types (<15 points). It was observed that no particular specifications were followed by the farmers during construction of cattle / bullock sheds in any of the surveyed districts of Odisha. Bullocks were sheltered along with cows and calves in one shed. The size of the shed varied according to the number of animals kept inside. It was found that 85 – 90 per cent of the cattle sheds in coastal Odisha were in the category of improper type and only 10 – 17 per cent were under satisfactory category while no shed came under the category of good or very good type.

KEY WORDS : Cattle shed, Evaluation score card, Specification

HOW TO CITE THIS PAPER : Mohapatra, A.K., Swain, S.K., Dash, A.K. and Behura, N.C. (2013). Survey on structural details and evaluation of cattle sheds in coastal Odisha, *Res. J. Animal Hus. & Dairy Sci.*, 4(2) : 74-76.

INTRODUCTION

As per agricultural statistics 2008, Odisha has 5.44 million hectares of cultivable land and 4.01 million operational land holdings with 27.39 per cent small and 51.50 per cent marginal farmers (Anonymous, 2008). The small and marginal farmers of Odisha completely depend on bullock power for doing various agricultural operations like tillage, planking, puddling, sowing, harvesting and transportation etc. As per livestock census 2007, there were about 5.36 millions of draught animals in Odisha (Anonymous, 2007). But very little attention is paid for their shelter in most of the cases.

They are kept in unhygienic sheds with undulating floor and prone to adverse weather conditions. The housing system for cattle needs to have comfortability in summer, cold protection in the winter and a clean, dry well ventilated environment. Therefore, a survey on the structural details of the existing cattle sheds in coastal Odisha was taken up and evaluated by developing a score card.

MATERIAL AND METHODS

A survey of the existing cattle sheds was taken up in three selected villages of Balasore, Khurda and Cuttack districts of coastal Odisha where minimum twenty pairs of bullock were available. Survey was done by help of a scheduled proforma and personally visiting the sheds to collect the information on land holdings, structural details along with number and size of animals kept inside it. Considering different ideal characteristics (Banerjee, 1986; Sastry *et al.*, 1991 and Indian Standards-11942 Anonymous (1986), an evaluation score card for cattle sheds in tropics was developed (Table A). There were ten characteristics *viz.*, direction of shed, floor type, wall type, roof type, maximum roof height, floor space/animal, floor gradient, air space/animal, ventilation and urine channel

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Table A : Score card for cattle sheds in tropics

Sr. No.	Characteristics	1	2	3	Maximum score
1.	Direction of shed	Other direction	Nearly North - South	Exactly North - South	3
2.	Floor type	Earthen	Brick/Stone	Concrete	3
3.	Wall type	Wooden stump fencing	Clay/Clay+Brick/Stone/Stump	Brick/Stone + Cement	3
4.	Roof type	Asbestos/ G.I. sheet	Asbestos with thatch	Thatch/Earthen tile	3
5.	Max. roof height	<8 ft	8 – 12 ft	12 – 15 ft	3
6.	Floor space/ animal	< 40 sq. ft	40 - 50 sq. ft	> 50 sq. ft	3
7.	Floor gradient	Undulating	Improper gradient	Proper gradient	3
8.	Air space/ animal	< 400 cu. ft	400 – 600 cu. ft	> 600 cu. ft	3
9.	Ventilation	Inadequate	Average	Adequate	3
10.	Urine channel	Earthen/ No channel	Stone/Brick channel	Concrete (1" in 10' slope)	3
				Total	30

in the score card with a maximum score of 3 points for each characteristic coming to 30 in total. Basing on the total score, the sheds were classified to four categories like very good (>25 points), good (21-25 points), satisfactory (15-20 points) and improper types (<15 points).

RESULTS AND DISCUSSION

From the survey, it was found that no particular specifications were followed by the farmers during construction of cattle / bullock sheds in any of the surveyed districts of Odisha due to lack of concern, ignorance and cost involvement. Bullocks were sheltered along with cows and calves in one shed. The size of the shed varied according to the number of animals kept inside.

While constructing the shed, no particular direction was preferred. It was built as per availability of the space and site near by the house of the farmer. In most of the cases, the roof was thatched one and in few cases it was of GI sheet or tile.

The roof height at centre of the shed also varied widely and in most cases due to low height roofs the air space per animal was less than 400 cubic ft. The wall in many cases was wooden stump fencing and in some cases was made of mud plus stone/brick. Hardly there was concrete walling. Ventilation was observed to be inadequate to average. In most of the cases floor was undulating one without proper gradient (Fig.1). In some cases stone plates, bricks and stones were set on the floor but not properly. The floor space per animal varied from 25 to 36 sq. ft. Concrete flooring was rarely found. In many cases there were earthen/stone or brick urine channels without proper gradient resulting in improper drainage. In very few cases, concrete urine channels were observed.

Types of cattle sheds found with different categories of farmers in different districts are given in Table 1. It was observed that in Balasore district, out of twenty farmers surveyed, none of the farmers had very good or good type of cattle sheds. Only 15 per cent farmers had satisfactory type animal housing

Table 1: Types of cattle sheds found with different categories of farmers in coastal Odisha

Sr. No.	Categories of farmers	No. of sheds surveyed	Very good type	Good type	Satisfactory	Improper type
Purunagan village of Balasore district						
1.	Marginal	8	-	-	-	8
2.	Small	10	-	-	2	8
3.	large	2	-	-	1	1
	Total	20	-	-	3	17
Aradiapada village of Cuttack district						
1.	Marginal	10	-	-	1	9
2.	Small	12	-	-	2	10
3.	large	1	-	-	1	-
	Total	23	-	-	4	19
Talabasta village of Khurda district						
1.	Marginal	9	-	-	-	9
2.	Small	11	-	-	1	10
3.	large	1	-	-	1	-
	Total	21	-	-	2	19



Fig. 1 : Outside and inside view of the common cattle sheds of coastal Odisha

structures and 85 per cent farmers had improper type of animal housing structures. Similarly in Cuttack district out of twenty three farmers surveyed, none of the farmers had very good or good type of cattle sheds. Only 17.39 per cent farmers had satisfactory type animal housing structures and 82.61 per cent farmers had improper type of animal housing structures. In Khurda district, out of twenty one farmers surveyed, none of the farmers had very good or good type of cattle sheds. Only 9.52 per cent farmers had satisfactory type animal housing structures and 90.48 per cent farmers had improper type of animal housing structures.

Conclusion :

Most of the farmers of coastal Odisha did not follow the ideal specifications while constructing the cattle shed due to lack of concern, ignorance and cost involvement. It was found that 85 – 90 per cent of the cattle sheds in coastal Odisha were in the category of improper type and only 10 – 17 per cent were under satisfactory category while no shed came under the category of good or very good type. The floor and wall of many sheds could be improved to come under good and satisfactory category.

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Received : 27.11.2013; Revised: 16.11.2013; Accepted : 26.11.2013