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**RSEARCH PAPER** 

# **Studies on mortality in gir crossbreed cows** A.R. DESHMUKH, **D.K. DEOKAR**, Y.G.FULPAGARE AND D.Z.JAGTAP

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### ABSTRACT

The mortality study was carried out on Gir crossbreds at RCDP on Cattle, MPKV Rahuri,Maharashtra. The six years data were analyzed according to age and cause of death. Mortality rate in 0 to 3 month age group was high (16.3 %) when compared with to that of 3 to 6 month age group (14.36%). Low mortality rate in adult cows may be attributed to better feeding practices for milking class cows and development of disease resistance in the adult age. Maximum deaths (25.66%) were occurred due to the pneumonia / respiratory failure and was followed by chronic enteritis / dehydration (20.40%). Maximum mortality (10.00%) was observed in the year 2005-06.

Key words : Crossbreed, Mortality, Disease

The recent census revealed that there is remarkable decreased in crossbred population where as the other species increase. To investigate the dangers in population, the age groupwise data at RCDP on Cattle, Mahatma Phule Krishi Vidyapeeth, Rahuri were analyzed. In all, the data of 2175 animals were analyzed with 152 death (6.99%). Out of 152 death, 16.3% from 0-3 month, 14.36 from 3-6 month and 7.78 from 6-12 month. while 3.26% were from above 1 year age. From the analysis it is found that the animals up to 6 month showed maximum death which needs more concentration to increase the crossbred population at farm conditions.

## MATERIALS AND METHODS

The investigation was undertaken on female gir crossbreds maintained at RCDP on Cattle, Mahatma Phule Krishi Vidyapeeth, Rahuri, Maharashtra over a period of six years (2003-04 to 2008-09). The data were analyzed according to age and cause of death.

The Gir crossbred caw calves were housed in calf pens up to the first six months with complete cover and then moved to paddocks with partial shelter. Calves were weaned at birth and fed with colostrum for the first five days, whole milk up to 3 months of age and calf starter after one month age. Adult cows were housed in open Byres system of sheds and fed with dry fodder, green fodder, silage and concentrate mixture.

The mortality was studied in four age groups *viz.*, 0-3, 3-6, 6-12 month and above one year age and adult cows. The mortality rate was calculated as the ratio of the number of death to the numbers of risk and expressed as percentage. Disease group wise mortality was worked out on the basis of number died due to a disease out of the total deaths.

## **RESULTS AND DISCUSSION**

Age - specific mortality in females of Gir crossbreds are presented in Table 1. Among the different age groups, the highest mortality in female (16.3 %) was recorded in 0-3 months age group and followed by closely (14.36%) in 3-6 month age group. Above one year, age recorded lower mortality (3.26%). High mortality rate during 0-12 months age group was reported by Verma *et al.* (1988) in Surti buffaloes.

High mortality rate during neonatal life may be due to inability of newborn calves to withstand adverse weather conditions.

Mortality rate in adult cows was comparatively low (3.26%) in the present study. Low mortality rate in adult cows may be attributed to better feeding practices for milking class cows and development of disease resistance in the adult age.

The results presented in Table 2 indicate that out of total deaths, maximum deaths (25.66%) were occurred due to the pneumonia/respiratory failure and was followed by chronic enteritis/dehydration (20.40%), anemia/ debility/rundown condition (18.42%),low birth weight/ premature birth/ respirator/circulatory failure (9.87%) and hepatitis/ jaundice (9.21%).Maximum mortality (10.00%) was observed in the year 2005-06 by the above causes. Similar type of studies were also conducted in Chennai (Damodaran and Sundajan, 1974), Andhra Pradesh (Lalithakunjamma, *et al.*, 1983) and Kerala (Nisar Ahmad, 1978).

Table 1 : Age specific mortality in Gir crossbreed cows											
Vear			Total								
I cai		0-3 month	3-6 month	6-12 month	Above 1 year	Total					
2003-04	No.exposed	55	47	47	319	468					
	No.died	15	8	6	05	34					
	Per cent	27.27	17.02	14.89	1.56	7.26					
2004-05	No. exposed	69	50	30	229	378					
	No.died	9	3	2	3	17					
	Per cent	13.04	6.00	6.66	1.31	4.49					
2005-06	No. exposed	66	46	46	202	360					
	No. died	17	8	3	8	36					
	Per cent	25.75	17.39	6.52	3.96	10.00					
2006-07	No. exposed	67	13	18	193	291					
	No. died	8	2	00	12	22					
	Per cent	19.40	15.38	00	6.21	7.56					
2007-08	No. exposed	66	16	16	238	336					
	No. died	8	4	3	13	28					
	Per cent	12.12	25.00	18.75	5.46	8.33					
2008-09	No. exposed	82	9	23	228	342					
	No. died	9	1	0	5	15					
	Per cent	10.97	11.11	0	2.19	4.38					
Overall	No. exposed	405	181	180	1409	2175					
	No. died	66	26	14	46	152					
	Per cent	16.3	14.36	7.78	3.26	6.99					

Table 2 : Diseasewise mortality of Gir crossbreed       Image: Comparison of Comparison												
Sr.No.	Disease	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	Total	Per cent			
1.	Pneumonia /Respiratory failure	8	8	8	4	7	4	39	25.66			
2.	Chronic enteritis/ dehydration	5	4	6	3	8	5	31	20.4			
3.	Anemia/debility /rundown condition	8	2	6	4	6	2	28	18.42			
4.	Peritonitis / toxemia /septicemia /	4	-					4	2.63			
	shock											
5.	Hepatitis / jaundice	3	2	2	4	3		14	9.21			
6.	Acute tympani/ bloat/traumatic	3	-		3	1		7	4.60			
	reticulo pericarditis											
7.	Food poisoning	1	-					1	0.67			
8.	Renalfailure/ rupture of bladder	1	-		0			1	0.67			
9.	Low birth weight / premature births/	1	1	6	2	3	2	15	9.87			
	respiratory/ circulatory failure											
10.	Accidental injuries			2			2	4	2.63			
	Dislocation			1	2			3	1.97			
	FMD			5				5	3.29			
	Total deaths	34	17	36	22	28	15	152	100			
	No. of animals exposed	468	378	360	291	336	342	2175				
	Per cent	7.26	4.49	10.00	7.56	8.33	4.38	6.99				

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