MANAGEMENT PRACTICES TO MINIMISE CALF MORTALITY IN BUFFALOES *(BUBALUS BUBALIS)*

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ABSTRACT

The data on mortality of buffalo calves were collected by random survey methods from 100 farmers from thirteen villages. . The data were classified according to land and animal holding, educational level, duration of colostrum feeding after birth, age and sex of calf, parity of dam and causes of mortality. The highest mortality in buffalo calves was recorded due to gastroenteritis (34.68%), followed by worm infestation (24.06%). On the basis of the various causes of mortality observed in the survey work, a package of practices was developed and applied to minimize the calf mortality in buffaloes. It was observed that in the treatment group (10 buffalo calves), where the package of practices was applied, no death was observed during entire period of experiment , whereas in control group out of 10 buffalo calves, 3 calves (two due to enteritis and one due to worm infestation) were died.

KEY WORDS : Calf mortality, Package of practices, Buffaloes

INTRODUCTION

Mortality of calf is an important trait both for breeding and economic point of view in dairy enterprise. The success of any dairy enterprise depends upon the survival of the calf crop produced. A high survival rate in a dairy herd helps to increase the selection difference which is one of the main factor controlling genetic gain and more economic returns. The first month of the Buffalo calf's life is very crucial and it is found that the calf mortality is as high as 19.5 per cent (Sreedhar et al., 2010). Hence the present study was undertaken to evaluate the management practices on buffalo calves in Malwa region of M.P.

MATERIALS AND METHODS

The data on mortality of buffalo calves were collected by random survey methods from 100 farmers of thirteen villages in and around Mhow tehsil of Indore district. For the selection of the sample, two stage stratified random sampling technique was adopted with villages at first stage and respondents within the village as the final stage sampling unit. Information on raising pattern, housing, feeding habits, socio economic status of farmers and cause of death of calves have been gathered by interviewing the farmers as per a questionnaire developed for the purpose. In order to access the possible causes of death of buffalo calves, the whole data collected were classified into nutritional ,managemental and various health hazards.

Twenty pregnant buffaloes approaching towards parturition were randomly selected from different farmers. While selecting the farmers, emphasis was given to their socioeconomic status, literacy level, land and animal holding, parity of dam etc. Duration of experiment has been kept from last month of pregnancy to 30 days of age of new born calf. A package of practices was developed on the basis of causes of mortality observed during survey.

This package of practices was adopted in two stages. In the first stage, the experimental pregnant buffaloes (10 Nos.) were kept under strict hygienic and scheduled scientific management condition during one month prepartum to calving . In the second stage of study, the newborn calves (10 Nos.) born from experimental pregnant buffaloes were reared for 30 days under scientific package which was designed on the basis of the causes of death observed in survey. However, in the control group the pregnant buffaloes (10 Nos.) and their newly born calves were reared by routine

Table 1: Package of practices* adopted to minimize mortality in new born buffaloes calves

Age (days)	Colostrum /milk (litres)	Treatment	Preventive against
1st	2	NT-Zole ½-1 bolus two times in a day	Calf scour
1st	2	Sealing naval vessels.	Navel ill
2nd	2	Cod liver oil capsule 1 daily for 2 days (sea cod)	Night blindness
3rd	2	Piperazine adipate 2 spoonful followed by 30 ml.liq. paraffine after 6 hours. + Tablet O_2 (ofloxacine + ornidazloe)	Ascariasis and dysentery
4th	2	(a) Sulcoprim (Trimethoprim + sulphamethoxazole) 1 bolus daily for 3 days (b) Provisacc ½ to 1 bolus / day for 7 days	Against diarrhea and calf scour
7th	(milk) @1/10 of body weight	As on day 3	Ascariasis and dysentery
8th-11th	do	Concitone syp.(multivitamin)1tsf daily for 4 days	To increase the vigor and strength.
12th	do	Use of ectoparasiticide	To get rid from ectoparasites.
13th -30th	do	Zymopet ½ TSF daily	Provide enzyme for efficient digestion

**Improvisation of package of practices (Arora, 1978)*

management practices adopted by farmers (Table 1). No inputs in the form of medicine, scientific advice/ knowledge were extended to the farmers of control groups.

RESULTS AND DISCUSSION

Highest mortality (Table 2) in buffalo calves was recorded due to gastroenteritis (34.68%), followed by worm infestation (24.06%) which is in close agreement with the findings of Moon et al. (1978) and Vorster et al. (1994). High incidences of gastroenteritis in calves might be due to bacterial or viral infections, which may be due to delayed feeding of colostrums to the calves. Pneumonia was found to be the third major reason of calf mortality, which resulted in 15.62 per cent death of buffalo calves. Management causes includes unhygienic condition of shed, incorrect knowledge about care

Table 2 : Mortality rate (%) according to causes of disease

Causes of disease	Male		Female		Pooled over sex	
	Total no of death	Mortality %	Total no of death	Mortality %	Total no of death	Mortality %
Gastroenteritis	55	35.03	56	34.35	111	34.68
Worm infestation	39	24.8	38	23.31	77	24.06
Pneumonia	21	13.37	29	17.79	50	15.62
Bloat	22	14.01	19	11.66	41	12.81
Skin disease	9	5.73	9	5.52	18	5.65
Omphalophlebitis	1	0.63	1	0.061	2	0.626
Septicemia	7	4.45	7	4.29	14	4.37
Underfeeding	2	1.27	1	0.61	3	0.93
Overfeeding	1	0.63	3	1.84	4	1.25

and management of new born calf, improper protection against unfavorable condition and defective management practices

It was observed that in the treatment group (10 buffalo calves), no death was observed during entire period of experiment, whereas in control group ,out of 10 buffalo calves , 3 calves (two due to enteritis and one due to worm infestation) were died . Similar findings were also reported by Arora (1978). These results indicated that this package of practices may be recommended to minimize buffalo calf mortality.

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