

## Effect of feeding herbal lactogenic bolus on crossbred cows

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### ABSTRACT

An experiment was conducted on fifteen crossbred cows (HF x Deoni) to assess the effect of lactogenic bolus (Maximilk Bolus), a herbal preparation. The bolus was offered to lactating cows (II to IV lactation) for a period of 30 days ( $T_2$ ) and 60 days ( $T_3$ ), being  $T_1$  the control. All the cows were kept under same plane of nutrition and management during the experimental period. Feeding of lactogenic bolus raised the milk yield of cows by 0.250 litre ( $T_2$ ) and 0.300 litre ( $T_3$ ) per day per cow during the experimental period. While during post-experimental period, milk yield was reduced by 0.140 litre in  $T_2$ , there was slight increase in  $T_3$  by 0.060 litre which was non-significant. None of the treatments influenced dry matter intake and fat, solid not fat as well as total solids contents of milk. It appears that the lactogenic bolus had limited influence on milk production.

**KEY WORDS :** Herbal, Lactogenic bolus, Crossbred cows

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### INTRODUCTION

Scientific management and feeding of cows and buffaloes is gaining popularity for maximum milk output and achieving higher returns. A nutritionally balanced and scientifically compounded feed, when added to the available fodder results in increased yield of milk. Supplementation of many herbal preparations is also a traditional method to increase the milk yield. The ancient Indians used many such agents. The "Jiwanti" (active ingredient of leptaden) was used by these ancient people to stimulate milk secretion. It has been described in "Ayurvedic literature" as stimulator of gentiomammary system. The present investigation was planned to evaluate the specific objectives: To study the lactogenic property of lactogenic bolus and to study the composition of milk due to feeding of lactogenic bolus.

### MATERIALS AND METHODS

The experiment was conducted at Cattle Cross

Breeding Project, Marathwada Agricultural University, Parbhani (Maharashtra). Fifteen crossed (HF x Deoni) cows of 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> lactation were selected and were distributed to three groups of feeding treatments. These were  $T_1$ - feeding of normal balanced ration;  $T_2$ - and  $T_3$ - given lactogenic bolus for a period of 30 and 60 days, respectively, in addition to the recommended balance ration. Each of the treatments was given post experimental periods of 30 days after their respective experimental periods. The bolus in use was known as "Jiwanti" and its brand name was Maximilk bolus. The ingredients of which were as below:

<i>Leptadenia reticulata</i>	2.00 g
<i>Asperagus racemosus</i>	1.00 g
<i>Withania somnifera</i>	1.00 g
<i>Excipients</i>	1.00 g

The animals under treatments were administered one bolus (5g) each in morning and evening along with concentrate mixture. They were also offered Nilwa sorghum as a green fodder and PVK 400 jowar sorghum as a dry fodder. The milk yield was recorded for both morning and evening and also the samples were collected for qualitative aspects of the milk during pre-experimental, experimental and post-experimental periods with all the treatments. The data recorded were subjected to RBD statistical analysis.

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## RESULTS AND DISCUSSION

Actual milk yield recorded for different treatments for pre-experimental, experimental and post-experimental periods are presented in Table 1.

It was noted that the mean milk yield was significantly increased in experimental period than the pre-experimental, in T<sub>2</sub> and T<sub>3</sub> than T<sub>1</sub>. This indicated that, the feeding of lactogenic bolus has affected the physiology of milk production in T<sub>2</sub> and T<sub>3</sub>.

In comparison between experimental and post-experimental observations, it was noted that there was a decrease in milk yield in post-experimental than experimental in T<sub>2</sub> whereas in T<sub>3</sub>, the animals were given lactogenic bolus for 60 days continuously, there was increased milk yield in post-experimental period and it was at with the milk yield of experimental period. This might be due to the fact that, the cows under treatment T<sub>3</sub> received lactogenic bolus continuously for 60 days *i.e.* 30 days more than the animals of T<sub>2</sub>. The results for the study are corroborated with results reported by Sarode and Pawar (1977), Arrora *et al.*(1983), Vihan and Panwar (1988) and Venkateshwarulu and Reddy (1993).

Treatments	Pre-experimental period			Experimental period			Post-experimental period		
	Pre	Exp	Post	Pre	Exp	Post	Pre	Exp	Post
T <sub>1</sub>	3.730	3.720	3.610	3.720	3.560	3.560	3.720	3.560	3.560
T <sub>2</sub>	4.580	4.830	4.250	4.830	4.690	4.690	4.830	4.690	4.690
T <sub>3</sub>	6.610	6.910	6.300	6.910	6.970	6.970	6.910	6.970	6.970
S.E.	0.2178	0.2971	0.3221	0.2971	0.3221	0.3221	0.2971	0.3221	0.3221
C.D at 5%	0.905	0.612	0.612	0.612	0.612	0.612	0.612	0.612	0.612

Treatments	Pre-experimental period			Experimental period			Post-experimental period		
	Pre	Exp	Post	Pre	Exp	Post	Pre	Exp	Post
T <sub>1</sub>	9.87	9.72	9.87	9.72	9.72	9.72	9.72	9.72	9.72
T <sub>2</sub>	9.88	9.82	9.82	9.82	9.82	9.82	9.82	9.82	9.82
T <sub>3</sub>	9.90	9.85	9.85	9.85	9.85	9.85	9.85	9.85	9.85
S.E.	0.077	0.036	0.036	0.036	0.036	0.036	0.036	0.036	0.036
C.D at 5%	NS	NS	NS	NS	NS	NS	NS	NS	NS

Treatments	Pre-experimental period			Experimental period			Post-experimental period		
	Pre	Exp	Post	Pre	Exp	Post	Pre	Exp	Post
T <sub>1</sub>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
T <sub>2</sub>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
T <sub>3</sub>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S.E.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
C.D at 5%	NS	NS	NS	NS	NS	NS	NS	NS	NS

The analysis of milk composition (Table 2) for pre-experimental, experimental and post-experimental periods that, there was no significant difference in any constituent (*viz.*, fat, SNF and T.S) for any period of feeding. This has clearly indicated that, the feeding of lactogenic bolus either for 30 and 60 days did not have any effect on milk composition. Similar trend has been noted by Anjaria and Gupta (1967), Badve *et al.* (1983), and Kumar *et al.* (1992).

The observations recorded on total DM intake by cows under different treatments during experimental and post-experimental periods have been presented in Table 3. The data revealed that difference for dry matter intake per animal per day was non-significant for both mean daily intake and dry matter intake per 100 kg body weight. These results are in agreement with Arrora *et al.* (1983).

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