Study of the influence of Galactin Vet Bolus on milk yield
in lactating dairy cows

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INTRODUCTION
Reduced milk yield is attributed to physiological, nutritional, managerial and metabolic disturbances or due to disease conditions. In the early stage of lactation (3-4 months), animal is in peak production, which later on starts to decline. The value of a dairy animal depends on its ability to produce milk efficiently, effectively and economically. Hence, it has been a common practice adopted by the farmers to feed their animals with galactogogues to achieve optimum milk production.

Galactogogues are medications that aid in initiating and maintaining adequate milk production. Most exert their pharmacologic effects through interaction with dopamine receptors, resulting in increased prolactin levels and thereby augmenting milk supply (Gabay, 2004). Also, galactogogues stimulate the activity of alveolar tissue and increase the secretory activity and thereby restore and regulate milk yield. For profitable dairy production, and to preserve animal health and prevent stress on animal production capacity through the use of hormones and alike, a holistic approach, making use of herbal formulations has come up as a desirable approach (Singh et al., 1991).

The present study was conducted to assess the efficacy of Galactin Vet Bolus, a polyherbal formulation containing powders of Leptadenia reticulata, Asparagus racemosus, Withania somnifera, Arundo donax, Cissampelos pareira, Foeniculum vulgare, and extracts of Eclipta alba and Solanum nigrum in lactating dairy cows.
MATERIALS AND METHODS
The present study was conducted in 30 healthy Holstein and Jersey crossbred cows of different lactations and age groups. All the animals used in study were housed, fed and managed under proper managemental practices. The animals chosen for the study had attained peak milk yield and were in the declining phase (120 days after calving) of milk production. The milk yield of each animal was recorded on a daily basis for a period of 32 days {i.e. before treatment (7 days), during treatment (10 days) and after treatment (15 days)}. Galactin Vet Bolus was administered at the rate of 5 boli orally, once-a-day for 10 days. The average increase in milk yield was studied. Statistical analysis on the data was done as per the method of Snedecor and Cochran (1967).

RESULTS AND DISCUSSION
The administration of Galactin Vet Bolus resulted in an increase in milk yield. Recorded milk yield of each animal on a daily basis showed an increased trend from day 2 of feeding Galactin Vet Bolus till day 10, and later on started to decline (Figure 1), which clearly indicates the galactogogue effect of Galactin Vet Bolus. There was a significant ($p<0.05$) increase in milk yield during the treatment period as compared to pretreatment period (Figure 2).

A wide range of percentage increase in milk yield was established. In 3.33% of cows, up to 5% increase; 60% of cows, 5 to 10% increase; in 16.66% of cows, 10-15% increase; in 10% of cows, 15-20% increase, and in 6.66% of cows, more than 20% increase in milk yield was recorded. Also, in 3.33% of cows, a 2% reduction in the milk yield was recorded. Such a variation in the milk yield can be explained on the basis of factors such as age, lactation number and stage of lactation. In 70% of the cows, more than 7% increase in milk yield was established.

Effect of Galactin Vet Bolus on different lactations and yield was assessed (Figure 3). In the 1st lactation, 80% of cows showed <10% increase and 20% of cows showed >10% increase in milk yield. Like wise, in the 2nd lactation, 50% of cows showed <10% and 50% of cows showed >10%. In the 3rd lactation, 75% of cows showed <10% and 25% of cows showed >10% and in the 4th lactation- all the cows showed <10% milk yield.

This indicates the enhanced beneficial effects of Galactin Vet Bolus on 2nd lactation as compared to other lactations.

In both medium and high yielding cows (Figure 4), Galactin Vet Bolus imparted similar effects.
A number of studies have been carried out on the galactogogue property of plants in animals. The potent galactagogue and galactopoietic action of the main constituent herbs such as *Leptadenia reticulata* (Moulvi 1963; Anjaria and Gupta 1967), *Asparagus racemosus* (Patel and Kantikar 1969), *Arundo donax* (Sharma, 1990) and *Foeniculum vulgare* (Nadkarni 1992) and others (I.C.M.R. 1987) are well documented.

**CONCLUSION**

Galactin Vet Bolus, a polyherbal formulation was found to improve the milk yield in dairy animals. Galactin Vet Bolus can be used safely for enhancing the milk production and thereby improve dairy economics.

**REFERENCES**


Figure 1: Efficacy study of Galactin Vet Bolus in dairy cows (n=30)

Figure 2: Effect of Galactin Vet Bolus on milk yield (n=30)
Figure 3: Study of the efficacy of Galactin Vet Bolus on different lactations (n=30)

Figure 4: Effect of Galactin Vet Bolus on milk yield in medium and high yielding cows (n=30)