EFFICACY OF FLUMETHRIN AGAINST *HAEMATOPINUS TUBERCULATUS* INFESTATION IN BUFFALOES

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**ABSTRACT**

In a field trial, flumethrin (Bayticol pour on) @ 1 mg/kg body wt. was found highly effective in adult buffaloes which were naturally infested with *Haematopinus tuberculatus*. Single treatment prevented reinfection for up to 35 days and no apparent adverse reactions or side effects were noticed during this period. Results revealed that flumethrin could be safely used against lice infestation in buffaloes under field conditions and may be repeated after a month particularly during winter season.

Lice infestation particularly during winter leads to itching and animal becomes restless and cannot sleep well. To allay itching animal bites the affected parts or rubs its body against wall or hard objects resulting in formation of wounds and bruises. The hair coat becomes rough and shaggy.

Flumethrin (pour on) a synthetic pyrethroid has been found highly effective under Indian conditions against *Dasyleptus cantharoe* in goats (Garg et al., 1998), ticks in cattle and buffaloes (Gupta et al., 1998 a; Bhushan et al., 1999) and sarcoptic mange in pigs (Gupta et al., 1998b). High efficacy of flumethrin has also been reported against Bovicola bovis of cattle (Liebisch et al., 1994). It has also been found effective against ticks that have developed resistance to other synthetic pyrethroids (Nolan et al., 1989). The present study was undertaken to evaluate the efficacy of flumethrin (pour on) against *Haematopinus tuberculatus* in buffaloes under field conditions.

The trial was carried out during Jan.-Feb., 1999 on 26 Murrah milch buffaloes naturally infested with lice. These animals belonged to three private dairy owners and these dairies were situated in close proximity to each other. While 18 buffaloes of two dairies were treated with flumethrin (Group-I), the remaining 8 buffaloes of third dairy served as control (Group-II). The lice were identified as *Haematopinus tuberculatus* and their burden assessed by summation of the total number counted by using the standard counting technique in 10 x 10 cm area of the five predilection sites on neck, shoulder, wither, back, and rump area of 6 animals in each group on day 0 i.e. before treatment. The lice population in both treated and control groups was assessed on day 7th, 14th, 21st, 28th & 35th post-treatment. The results were expressed as the per cent reduction in lice population.

Flumethrin (Bayticol pour on 1% w/v, Bayer, Germany) was applied @ 1 mg/kg b.wt. along the mid-dorsal line on all the 18 buffaloes of group 1. The treated animals were closely observed and examined for any adverse clinical effects or reactions for approximately 4 hours after treatment, then on next day and subsequently at weekly intervals.

Though most of the lice were dead by the next day, the nits were still there. On 7th day of treatment there was 100%
reduction in lice population which continued up to 35th day of treatment. Excepting one buffalo in which a few lice were seen on 35th day, no other treated animal showed presence of any lice during this period. But by 37th day, reinfestation with lice was seen in all of the treated animals, in control group of animals there was an increase in the mean number of lice (128.7) by 35th day, which was 120.3 on "0" day.

A number of insecticides have been tried against lice infestations in domestic animals in India but with variable efficacies and residual effects. Shastri (1991) reported that ivermectin showed 100% efficacy against lice infestation in cattle, buffaloes, goats and dogs by the 10th day of treatment. Maske et al., (1996) found Amitraz highly effective against lice infestation in goats but the reinfestation started within 22 days.

The present study revealed that reinfestation with lice started by 35th day. This finding confirms the earlier findings of Dorn (188) who reported a protection period of 35 days in cattle against different lice species. However, a protection period of 42 days has been reported against Bovicola bovis in cattle (Liebisch et al. 1994). None of the treated animals in the present study exhibited any apparent signs of adverse clinical effects.

Flumethrin, which was highly effective against ticks has proved equally effective against lice infestation in buffaloes in this field trial. Keeping in view the longer residual effect, safe therapeutic usage and convenient and time saving application, flumethrin can be used in the long-term control and strategic treatment programmes against lice infestation in buffaloes.

REFERENCES