

## UTILIZATION OF PHYTOTHERAPIC PRODUCTS ON THE CONTROL OF *Haematobia irritans* IN DAIRY COWS CONTAMINATED NATURALLY

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### Introduction

*Haematobia irritans* is an haematophag fly that attack, principally, the cattle (Faria, 1998). His disturbs at cattle herd are relationed with intake decrease (Silva, 2002). Chemical products utilized in his combat lead need of milk rejected, causing economic troubles to farmers. The use of phytotherapeutic products, reduce costs of exploration and decrease levels of contamination for animals, environment and human.

### Material and Methods

The trial was developed of November, 2<sup>nd</sup> to 14<sup>th</sup>, 2003, in Department of Animal Science, Federal University of Santa Maria, Brazil, utilizing 30 animals of Holstein breed, naturally contaminate. As treatment was used *Azadirachta indica* extract at 1%, conform recommended by Martinez (2002), and a phytotherapeutic compound formulated with 50g of *Eucaliptus globulus*, 50g of roots and rhizomes of *Cymbopogon citratus*, 10g of bulbs of *Allium sativum* and 300g of animal fat, this item recommended by Garcia & Lunardi (2001). A group of animals did not receive any treatment, had been considered control group. *Azadirachta indica* extract was applied in aspersion with manual machine, utilizing four liters of solution/animal in cows and heifers and three liters/animal in calves, with precaution that aspersion was uniform for whole animal. The phytotherapeutic compound was made triturating dry leaves of *Eucaliptus globulus*, roots and rhizomes of *Cymbopogon citratus* and bulbs of *Allium sativum*, adding, gradually, animal fat in this mixture. Was applied the compound in dorsal line of animals, in all extension. The count of fly were realized daily, at 08 a.m. for two observers, during six days, before application of products. After application, counts were realized until return and fixation of infestation at anterior levels at treatments, with caution in differentiation of other fly species. Experimental design utilized was randomized blocks with unequal number of repetitions to treatment.

### Results

In calves, the reduction in count of *Haematobia irritans* in treated group with phytotherapeutic group was 33.00 %, 75.00 % and 62.24 %, in first, second and third days after treatment, respectively, when compared with average count of pre-treatment period. *Azadirachta indica* extract presented reduction of 35.17 and 10.40 % in count of *Haematobia irritans* in first and second days, respectively. Later, both treatments, number of fly return to be superior at pre-treatment period. In heifers and dry cows, the effect of products was similar with 37.80; 48.00

and 38.20 % of reduction in infestation of fly in first, second and third days after treatment and *Azadirachta indica* extract with 10.44 and 52.42 % of reduction in first and second days after treatment, respectively. In lactation cows treated with compound, reduction of count was 39.60 % only first day after treatment and in group treated with *Azadirachta indica* extract did not observe any reduction of number of *Haematobia irritans*.

### Discussion

In all categories was observed an increase in number of fly of control group, later application of treatments. Also, was verified an oscillation in infestation of animals of control group, with high concentration coincided with period of high efficiency in treated animals. With loss of efficiency, was observed a reduction of number of fly in non-treated animals. This result may be explained by migration of fly of treated group to non-treated group. The results demonstrated that *Azadirachta indica* extract utilized in concentration of 1 % presented a low efficiency in repellence of *Haematobia irritans*. So, do not confirm the orientations of Martinez (2002), where *Azadirachta indica* extract utilized in concentrations minor at 2 % had effect of repellence about *Haematobia irritans*. Phytotherapeutic compound, as recommended by Garcia & Lunardi (2002) also presented low efficiency, because showed low reduction in total number of fly and, still, a short period of reduction (one to three days). The results obtained demonstrate need to study levels more higher of *Azadirachta indica* extract and components of phytotherapeutic compound, associated at repetitions of application.

### Conclusion

The authors conclude that *Azadirachta indica* extract at 1% applied by aspersion and a phytotherapeutic compound (*Eucaliptus globulus*, *Allium sativum* and *Cymbopogon citratus*) applied in dorsal line of animals presented low efficiency on control of *Haematobia irritans* in dairy cows naturally contaminate.

### References

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