# **Titre d’article**: Effect of Climate on the Epidemiology of Bovine Hypodermosis in Algeria

**Abstract :**

In order to explore the effect of climate on cattle warble fly infestation, a total of 1.635 animals from 4 departments of Northern Algeria were examined visually and by manual palpation for the presence of warbles. Cattle were examined from March to June 2014, coinciding with the peak of emergence of warbles, and both the prevalence and intensity of infestation were recorded. The departments included in this study were located in the two different climatic areas in Northern Algeria: humid (Bejaia and Tizi Ouzou) and semi-arid (Tissemssilt and Ain Defla). The overall prevalence was 28.75%; the intensity of infestation ranged from 1 to 98 warbles per animal (mean 18.93±11.05). The prevalence and intensity of infestation within the departments with semi-arid climate (38.23%; 21.57±11.98) was significantly higher than in those with humid climate (20.74%; 14.84±7.86). The CHAID algorithm showed the climate as the most influencing factor for warble fly prevalence, followed by the husbandry system and breed. Logistic regression and multivariate ANOVA indicate that in addition to climate, other intrinsic (age, sex, breed) and extrinsic factors (husbandry system, treatment) included in the study also were associated with both, prevalence and intensity of infestation. Our results indicate that in semiarid areas of Northern Algeria environmental conditions are more favorable for the development of free stages (pupae and adult flies) of Hypoderma spp life-cycle than in humid areas