# **Titre d’article**: Impact of Dietary Supplementation with Pediococcus acidilactici on Zootechnical and Sanitary Performances of Broilers in Algeria

**Abstract :**

: Two groups of 1763 broiler chicks of (Hubbard F15) strain and of mixed sexes were bred under the same breeding conditions for a period of 58 days. The experimental group received a food supplemented with probiotics Pediococcus acidilactici in a quantity of 10 efu kg of food and water free of antibiotics. The control group received the same food but without probiotic supplement whereas the drinking water was treated according to the protocol closest to those currently used in aviary breeding on the Algerian territory. The results related to the zootechnical performance emphasized that the addition of probiotic has significantly improved body weight gain during the growing phase, thing translated into a better feed conversion ratio and a mortality rate significantly improved after the 3rd week. The lesions observed at the autopsy of the corpses from the control group do not reflect any specific pathology. This situation could be explained by the overuse of antibiotics which triggered, relative to the animals belonging to this group, an effective coverage against various microbial attacks while those belonging to the experimental group are being indicatives of Colibacillary complications and coccidiosis episodes treated on D and D., with an anticoccidial drug (Toltrazuril, Baycox) requiring a minimum waiting period of 12 days. The monitoring of the evolution of the floras made it possible to highlight the stimulating effect of Pediococcus acidilactici on the growth of lactic bacteria on the one hand; the fluctuating loads in Enterobacteriaceae observed during D.-D, which could be explained by the traditional breeding conditions and the immune status of the broiler that is yet to become mature as well as their regression (starting from D₁) accompanied by the stabilization of the lactic flora at relatively large thresholds. Therefore, researchers can assert that there is a close relation between the barrier effect and the improvement of the zootechnical performance.