**GASTROINTESTINAL ENVIRONMENT CONTROL**

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The gastrointestinal tract acts as a selective barrier between its lumen and animal tissues. This barrier is formed by physical (mucus, tight junctions), chemical (antibacterial peptides), immunological (Gut-Associated Lymphoid Tissue) and microbiological (autochthonous established microbioma) agents. There is a wide range of factors that can negatively affect the balance between intestinal components, and eventually, avian performance, namely those related to the diet (substrates for bacterial fermentation), infectious agents (bacteria and protozoa present in water or in feed), environmental factors (temperature, ventilation) and farming practices (density, stressing factors). Gastrointestinal environment can be defined as substrate and the conditions around it: pH, particle concentrations, substances, glandular excretions and bacterial populations. These conditions vary in time, depending on the presence of the bolus and its composition, as well as on the physiological status of the animal, and the possible infection challenges. Intestinal environment, besides, has a direct effect on intestinal morphology and villi development. A correct control of this ambience is necessary to obtain an optimum diet digestibility, and to decrease the possibility of bacterial dysbiosis. This communication defines intestinal ambience conditions, the components most commonly found in the intestinal lumen and the bacterial populations that can be found in it, their balances and functions. It also reviews how the diet composition alters gastrointestinal tract ambience, and some available tools to control these parameters and achieve animal optimum performance: antibiotics, organic acid salts and essential oils.

**Key Words:** Gastrointestinal tract, microflora, morphology, organic acids, butyrates, essential oils, antibiotics, probiotics, prebiotics