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Impact of an Organic Acid Blend on Feed Efficiency and Mortality of Broilers in Southern India – A Performance Analysis

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Abstract

Overuse of antibiotics, the development of resistant bacteria and their damaging effects on human health have led to the ban on the prophylactic use of antibiotics in animal farming. However, looking at the bacterial challenges experienced in farming, it is still imperative to have a tool to control bacterial infection and improve performance of animals. Organic acids are considered the most promising alternative to the antibiotic growth promoters. In addition to their anti-bacterial and anti-fungal properties, organic acids provide many extra benefits such as improving overall feed hygiene, optimising the intestinal pH and thereby improving nutrient digestibility. Organic acids and their salts have been tested in poultry production since the 1980's. The current study investigated the impact of an organic acid blend (OAB), consisting of sodium propionate, propionic acid, ammonium formate, formic acid, as well as sorbic acid and a surfactant, developed and previously reported to improve feed hygiene, on its influence on broiler performance in commercial farms in southern India. This study analyzed the average impact from all studies carried out in southern India on the effect of the additive on feed efficiency and mortality. The final data-set contained the results of 23 farm trials with 0.1 % OAB-inclusion and covered 224,000 broilers (Vencobb 500). Results are expressed as percentage difference from the negative control. Data were subjected to statistical analysis and a significance level of 0.05 was used in all tests. The performance of broilers based on feed efficiency was significantly improved by 2.8 % ($p = 0.009$). Furthermore, mortality was significantly reduced on average by 14.3 % ($p = 0.025$). This is in full agreement with previous reports on the impact of "feed hygiene enhancer" on broiler performance. It is therefore concluded that the OAB can, next to its beneficial effects on feed hygiene, also have a beneficial impact on broiler production under Indian conditions.

Keywords: Broiler performance, feed hygiene, India, liquid acid blend

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