ALTERNATIVE PROTEIN SOURCES IN BROILER NUTRITION: NATIONAL OPPORTUNITIES AND GLOBAL CHALLENGES FOR SUSTAINABLE PRODUCTION

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Abstract

Chicken meat is, globally, one of the most efficient sources of animal protein, due to superior feed conversion and the rapid growth rate of poultry species. However, it relies heavily on soybean meal a largely imported resource with significant economic and environmental impact. In the current context, marked by international market volatility and the growing pressure for sustainability, diversifying protein sources has become a strategic priority. This paper analyzes the nutritional composition, economic feasibility, and practical potential of alternative protein sources in broiler nutrition, with a focus on locally available ingredients: sunflower meal, rapeseed meal, and grain legumes (peas, chickpeas, lentils). The advantages and limitations of each source are discussed in the national context, alongside international trends (insect meal and algae-based proteins), and their implications for zootechnical performance, meat quality, and sustainability. The conclusions support the combined use of local ingredients, balanced with synthetic amino acids, as a viable alternative to conventional soybean-based formulations, aiming to reduce feed costs and carbon footprint.

Key words: *broiler nutrition, alternative protein sources, soybean meal replacement, local feed ingredients, sustainability*