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## **FEATURES OF PRODUCTIVE AND METABOLIC EFFECTS OF TRYPTOPHAN IN FARM POULTRY**

The literature data and results of their own research on the productive and metabolic effects of an essential amino acid tryptophan for the use of its additives in diets for feeding various types of farm poultry are presented.

It is shown that the needs of farm poultry in individual amino acids are determined by the degree of their availability for use in physiological and biochemical processes of the organism and the possibility of synthesis in organs and tissues. In order to correctly balance the mixed fodder on all amino acids, it is necessary to calculate the index of amino acid need, which is controlled by the energy-protein ratio.

Poultry rations are correctly being normalized by the content of 11 essential amino acids, among which lysine, methionine + cystine and tryptophan are "critical".

The role of tryptophan in poultry organism is extremely important and polyhedral. Being one of the limiting amino acids, it is important for the poultry organism not only in the synthesis of protein but also in the metabolism. Scientific studies have shown that tryptophan is involved in the regulation of the endocrine system, which is required for the synthesis of hemoglobin associated with the fertilization process. Tryptophan is one of the essential amino acids necessary for the synthesis of nicotinic acid, serotonin, tryptamine, adrenochrome.

Due to the lack of tryptophan in the poultry diet, the growth of young animals is delayed, the costs of feed for production increase, atrophy of the endocrine glands and sexual glands, blindness arises, anemia develops, and resistance and immune properties of the organism decrease.

The deficit of tryptophan in the poultry diet reduces the organism's absorption of nitrogen in feed, reduces the level of hemoglobin and proteins in the plasma, the transport of lipids from the liver to the blood.

The data provided in the article shows the important productive and metabolic role of tryptophan in the organism of farm poultry. Therefore, optimizing the level of this amino acid in rations of different species of poultry, depending on age, physiological state and level of feeding is an

actual scientific task and make of considerable practical and economic interest.