

Amylase Activity in Pancreas and Chime of Laying Quails Submitted at Different Threonine Levels

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Threonine (Thr) is the third limitant amino acid in bird nutrition. Thr is a constituent of intestine mucins, which impaired pathogens adherence at the intestinal mucosa, toxins absorption and its deficiency decreased the mucin production, reducing the intestinal protection. Amino acids synthetic addition in ration reduce protein levels of animal diet. However, it is known that the ration protein levels modified the use of amino acids by the intestinal cells and digestive enzymes activities as amylase in pancreas and intestinal content (chime). Thus, it was determine the relation among pancreas and chime amylase (E.C.3.2.1.1.) and Thr diet levels of laying quails (*Coturnix coturnix japonica*). Sixty birds were submitted at three Thr levels (0.65, 0.75 e 0.85%) in three period of 21 days each (factorial 3x3). Four animals from each treatment were slaughtered at the end of each period. Pancreas and chimes were collected, weighed and homogenized with cool distilled water and the enzymatic activities were determined by colorimetric methods with specific kit. Protein was determined by Lowry method. Increasing Thr levels reduced the specific activity of amylase in pancreas ($P<0.05$) but did not affect the activity per mg of tissue. In each period the activity decreased with time. The amylase activity per g of chime and chime amylase specific activity presented quadratic statistical model ($P<0.05$) per period and treatment, being 0,75% the better recommended dose. Then, Thr level modified in different model the amylase activity in pancreas and chime.

Key-words: a-amylase, chime, japanese quail, pancreas,
Support: FAPEMIG, CNPq