

Response of Broilers Performance to Dietary Betaine and Folic Acid at Different Methionine Levels

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Abstarc :

Two experiments were designed to estimate the effect of methionine levels (0.33 and 0.45%) with betaine and folic acid on broiler performance. A total of 648 unsexed one week old Arbor Acres broiler chicks was randomly divided into two experiments according to dietary methionine level. Each experiment divided into nine treatment groups of 12 birds each with three replicates. The experimental diets were formulated to cover the nutrients requirements for broilers and were supplemented with betaine at 0.5, 0.75 or 1.0 gm kgG1. Folic acid was added at 0.5, 0.75 or 1.0 mg kgG1 for each betaine level. Results can be summarized as follows: Live body weight gain and feed conversion efficiency were significantly increased with increasing folic acid addition and increased with increasing betaine levels up to 0.75 gm kgG1 diet. Productive performance was significantly improved by increasing different levels of betaine and folic acid. The OM, CP, EE, CF and NFE digestion coefficients were significantly ($p>0.5$) increased with increasing betaine or folic acid levels in the diets. The improvement of chick performance due to added betaine was depressed when chicks received diets containing recommended methionine, whereas, chicks performance improved by increasing folic acid level. Folic acid had significant effect on dressing %, the highest level received the highest dressing % recorded, while no significant effects were noticed in digestion coefficients of nutrients. Blood plasma AST and ALT decreased with increasing dietary methionine level. The highest economic efficiency was listed when diet contained the highest levels of betaine and folic acid.

Key Word :

Methionine, betaine, folic acid, performance, broilers