

## Effects of Balancing Diets for more Amino Acids on Growth Performance of Broilers Fed Rice Bran Based Diets

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### Abstract

Objective of this study was to determine whether the adverse effects associated with high dietary rice bran (RB) inclusion levels in broiler diets could be corrected by balancing diets for higher number of amino acids. The experiment followed a completely randomize design in 2x4 factorial arrangement. Eight experimental diets were formulated using linear model based computer software (CUFATotal Feed). Treatment factors were two dietary RB levels (20 and 40%) and four levels of AA considerations in ration formulation (1. lysine and methionine, 2. 1 + isoleucine, 3. 2 + valine, 4. 3 + threonine. When rations were balanced for lysine and methionine, many of the other AA s were in excess. No practical ration could be formulated to meet the threonine requirement. Twenty two days old broiler chicks (n=144) were allocated in to 48 pens and fed one of the eight experimental diets *ad libitum* from day 23-43. Balancing the diets for higher number of AA s had no significant effect on any of the growth performance parameters. Live weight on day 43, weight gain from day 23-43 and feed intake and the tibia ash contents of the birds fed 40% dietary RB were significantly lower than those of 20% RB fed counterparts. However, feed conversion ratios were not significantly different between the birds fed two dietary RB levels. Interaction between RB levels and the number of AA s considered in ration formulation was not significantly different with respect to any of the growth parameters measured. It was concluded that balancing rations for up to four amino acids; lysine, methionine, isoleucine and valine does not mitigate the adverse effects of 40% dietary RB on broiler growth performance.

**Keywords:** amino acids, broiler performance, rice bran