**EFFICACY OF METHIONINE SOURCES UNDER HEAT STRESS CONDITIONS**

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Different methionine sources have been commonly supplemented in poultry diets. A performance study was conducted to validate that 65 parts of DL-methionine (DL-Met) can replace equal parts of L-methionine (L-Met), and 100 parts of methionine hydroxy analogue-calcium salt (MHA-Ca). A total of 880 male day-old Cobb 400 broilers were randomly distributed into 4 treatments with 10 replicates per treatment (22 birds per replicate). Birds were fed with one of the four experimental diets during starter (1-21 d) and finisher (22-42 d) phases. The treatments included: (1) corn-soybean meal basal diet deficient in methionine plus cystine; (2) basal diet supplemented with DL-Met; (3) basal diet supplemented with L-Met; and (4) basal diet supplemented with MHA-Ca at 65 % efficacy (weight to weight basis). Results showed that body weight and feed efficiency were significantly higher (P=0.001) in birds fed diets supplemented with methionine sources compared to those fed basal diet. Although similar growth performance was expected for birds fed diets supplemented with methionine sources but the performance was significantly lower (P<0.05) in birds fed MHA-Ca supplemented diet. Abdominal fat content was significantly lower (P=0.001) in birds fed diets supplemented with methionine sources and it was lowest (P<0.05) in birds fed DL-Met supplemented diet. Results of present study confirms that under heat stress conditions, there is no difference in the nutritional value between DL-Met and L-Met, while the nutritional value of MHA appears to be lower than the previously reported efficacy of 65% compared to DL-Met.