

308 Concentrations of nitrogen-corrected apparent metabolizable energy and amino acid digestibility in soybean meal from Argentina, Brazil, China, Thailand, and the United States fed to broilers. Kelly M. Sotak-Peper*¹, Rommel C. Sulabo², Carl M. Parsons¹, and Hans H. Stein¹, ¹University of Illinois at Urbana-Champaign, Urbana, IL, ²University of the Philippines Los Banos, Los Banos, Luzon, Philippines.

The Philippines import soybean meal (SBM) from many different countries, but the quality of the SBM from the different sources is not known. Therefore, 2 experiments were conducted using SBM from Argentina (ARG 1 and ARG 2), Brazil, China, Thailand, and the U.S (US1, US2, and US3) that was collected at feed mills in the Philippines. The objective was to determine concentrations of nitrogen-corrected apparent metabolizable energy (AMEn) and standardized ileal digestibility (SID) of AA in each source of SBM. In both experiments, ANOVA was used with the PROC MIXED function in SAS. In Exp. 1, 72 d-old male broilers were allotted to 1 of 9 treatments using a completely randomized design with 8 broilers per treatment. Treatments included a corn-SBM based basal diet and 8 diets that were formulated by mixing 70% basal diet and 30% of each SBM source. Broilers were placed in individual metabolism crates equipped with an aluminum tray for total collection of excreta. Excreta were collected for 3 d after a 10 d adaptation period. The AMEn (2,762 kcal/kg) of Chinese SBM was greater ($P < 0.05$) than in ARG 1 (2,699 kcal/kg) and ARG2 (2,737 kcal/kg), but not different from the other sources. No differences in BW gain were observed, but there was reduced ($P < 0.05$) feed intake and improved ($P < 0.05$) G:F for birds fed US1 SBM compared with birds fed Argentinian or US2 SBM. In Exp. 2, 48 cecectomized roosters were allotted to 1 of 8 treatments using a completely randomized design with 6 roosters per treatment. The cecectomized roosters were tube fed 30 g of SBM and excreta were collected for 48 h following feeding. There was a tendency for greater ($P < 0.10$) SID of indispensable AA for US3 SBM than for the other sources of SBM. The SBM from US3 had greater ($P < 0.05$) SID of Lys compared with Brazilian SBM. The SBM from US3 also had greater ($P < 0.05$) SID of dispensable AA and total AA than SBM from China, Thailand, US1 and US2. These studies demonstrated that differences in energy and AA digestibility exist among different SBM sources.

Key Words: amino acid, energy, soybean meal