

Table 1. Effect of Sangrovit® Extra on AID of AA and starch in period 1 of the experiment

| Item, % | - ¹ | 90 ¹ | 180 ¹ | 360 ¹ | SEM | <i>P</i> -value | |
|---------|----------------|-----------------|------------------|------------------|-------|-----------------|--------|
| | | | | | | quadratic | period |
| Starch | 92.9 | 94.7 | 93.8 | 91.6 | 0.593 | 0.004 | 0.001 |
| Lys | 80.0 | 81.0 | 80.6 | 79.6 | 1.030 | 0.407 | 0.335 |
| Met | 85.1 | 86.6 | 85.6 | 83.4 | 0.771 | 0.082 | 0.043 |
| Thr | 71.2 | 75.0 | 72.4 | 69.7 | 1.096 | 0.012 | 0.008 |
| Trp | 80.7 | 81.2 | 81.8 | 78.4 | 0.844 | 0.042 | 0.001 |
| Val | 76.8 | 79.5 | 78.1 | 76.2 | 0.919 | 0.034 | 0.008 |

¹Inclusion of Sangrovit® Extra in diets (mg/kg).

on d 26 and 27 (period 2). Data were analyzed using Proc Mixed in SAS and effects of Sangrovit® Extra inclusions were analyzed using contrasts statements with coefficients for unequally spaced treatments being generated using the Proc IML statement in SAS. Differences between periods were analyzed using a repeated measures statement. Results indicated that a quadratic increase ($P < 0.05$) in the AID of Thr, Trp, and Val was observed in period 1 (Table 1), and AID for CP, Arg, His, Ile, Leu, Met, Phe, Thr, Trp, Val, Cys, Pro, and Tyr was greater in period 2 than in period 1 ($P < 0.05$). In period 1, a quadratic increase ($P < 0.05$) was observed for the AID of starch as Sangrovit® Extra increased in the diet, but the AID of starch was less ($P < 0.05$) in period 2 than in period 1 (i.e., 92.9, 94.7, 93.8, and 91.6% in period 1 and 90.8, 93.2, 91.3, and 90.9% in period 2). No differences among treatments or periods were observed for AID of AEE. Results indicate that approximately 90 mg/kg of Sangrovit® Extra is optimum for AID of starch and AA.

Key Words: amino acid digestibility, alkaloid, feed additive

283 Effects of Sangrovit® Extra on Apparent Ileal Digestibility of Amino Acids, Crude Protein, Acid Hydrolyzed Ether Extract and Starch By Weanling Pigs Fed Corn-Soybean Meal Diets. C. M. Rundle*¹, H. H. Stein², ¹University of Illinois at Urbana-Champaign, Champaign, IL, ²University of Illinois Urbana-Champaign, Urbana, IL

An experiment was conducted to determine if inclusion of a preparation of benzo[c]phenanthridine alkaloids obtained from *Macleaya cordata* (Sangrovit® Extra) in corn-soybean meal diets fed to weanling pigs increases the apparent ileal digestibility (AID) of AA, CP, starch, and acid hydrolyzed ether extract (AEE). Thirty-two ileal cannulated barrows (BW = 12.19 ± 1.38 kg) were allotted to a randomized complete block design with 4 diets and 8 replicate pigs per diet. Diets were supplemented with 0, 90, 180, or 360 mg/kg Sangrovit® Extra and with 0.40% chromic oxide. Diets were fed for 27 d and ileal digesta were collected on d 13 and 14 (period 1) and