

and standardized total tract digestibility (STTD) of Ca in calcium carbonate and Vistacal at 2 different levels of Ca, and to determine if phytic acid affects digestibility of Ca in these 2 ingredients. An additional objective was to determine the basal endogenous loss of Ca in the stomach, small intestine, and large intestine. Nine pigs (initial BW: 23.8 ± 1.3 kg) were cannulated in the duodenum and in the distal ileum and allotted to a 9×6 Youden square design with 9 diets and 6 periods. Diets contained calcium carbonate or Vistacal as the sole source of Ca, 0 or 1% phytic acid, and 0.4 or 0.8% Ca. A Ca-free diet was also formulated and used to measure the basal endogenous loss of Ca. Fecal, ileal, and duodenal samples were collected on d 5 and 6, d 7 and 8, and d 9 and 10, respectively. The basal duodenal endogenous loss of Ca (1.03 g/kg of DMI) was greater ($P < 0.05$) than the ileal (0.42 g/kg of DMI) and total tract basal endogenous loss (0.67 g/kg of DMI). The SDD, SID, and STTD of Ca were not affected by the level of phytic acid in the diet. Increasing the level of Ca from 0.4 to 0.8% reduced ($P < 0.05$) the SDD, SID, and STTD of Ca if Vistacal was the source of Ca, but that was not the case if calcium carbonate was used (Ca level \times Ca source, $P < 0.05$). The SID and STTD of Ca was greater ($P < 0.05$) than the SDD of Ca when Vistacal was fed, but no differences between the SDD, SID, or STTD of Ca in calcium carbonate were observed (Ca source \times site of absorption, $P < 0.05$). In conclusion, the basal duodenal endogenous loss of Ca is greater than the basal ileal and total tract endogenous loss. Standardized digestibility of Ca is not affected by level of phytic acid, but is affected by dietary Ca level if Vistacal is the source of Ca, but not if calcium carbonate is used. Calcium from calcium carbonate is mostly absorbed before the duodenum, but Ca from Vistacal is mostly absorbed in the jejunum and ileum.

Key Words: calcium, pigs, standardized digestibility

NONRUMINANT NUTRITION: MINERALS

O227 **The site of absorption of calcium from the intestinal tract of growing pigs.** J. C. González-Vega^{1,*}, C. L. Walk², H. H. Stein¹, ¹*Animal Sciences, University of Illinois, Urbana-Champaign*, ²*AB Vista feed ingredients, Marlborough, United Kingdom*.

An experiment was conducted to determine the standardized duodenal digestibility (SDD), standardized ileal digestibility (SID),