

ATTD of Ca was 69.98 ± 3.24 , 74.28 ± 2.71 , 69.96 ± 2.93 , and $72.07 \pm 2.66\%$ for diets containing 200, 500, 700, and 1125 micron particle sizes of limestone, respectively. The STTD of Ca was 74.15 ± 3.24 , 78.45 ± 2.71 , 74.13 ± 2.93 , and $76.24 \pm 2.66\%$ for diets containing 200, 500, 700, and 1125 micron particle size of limestone, respectively. Retention of Ca was 67.39 ± 3.08 , 70.40 ± 2.63 , 63.93 ± 2.79 , and $67.18 \pm 2.16\%$ for diets containing 200, 500, 700, and 1125 micron particle size of limestone, respectively. Similarly, particle size had no effect ($P > 0.05$) on ATTD and retention of P. The ATTD P was 64.46 ± 1.71 , 66.78 ± 2.65 , 64.18 ± 2.98 , and $63.18 \pm 1.69\%$ and retention of P was 61.38 ± 1.39 , 63.83 ± 2.82 , 61.90 ± 2.76 , and $60.94 \pm 1.53\%$ for diets containing 200, 500, 700 and 1125 micron particle size of calcium carbonate, respectively. In conclusion, particle size of calcium carbonate did not affect ATTD and STTD of Ca, or retention of Ca by pigs.

Key Words: calcium, particle size, pigs

114 **Effect of particle size in calcium carbonate on apparent and standardized total tract digestibility and retention of calcium by growing pigs.** L. A.

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An experiment was conducted to determine apparent total tract digestibility (ATTD), standardized total tract digestibility (STTD), and retention of Ca among diets containing calcium carbonate produced to different particle sizes. Four corn-potato protein isolate-based diets were formulated to contain identical concentrations of Ca and P, but calcium carbonate (ILC Resources, Alden, IA) used in these diets was ground to 4 different particle sizes (approximately 200, 500, 700, and 1125 microns). Diets were formulated to contain 0.70% Ca and 0.33% standardized digestible P. A Ca-free diet was also formulated to determine basal endogenous losses of Ca. Forty growing barrows (average initial BW of 15.42 ± 0.70 kg) were allotted to a randomized complete block design with 5 dietary treatments and 8 replicate pigs per treatment. Experimental diets were provided for 12 d with initial 5 d adaptation period. Feces were collected for 5 d using marker-to-marker approach. Data were analyzed using MIXED procedure of SAS with fixed effect, diet, and random effect, block. Basal endogenous losses of Ca were 0.329 g/kg DMI. Results indicate particle size did not influence ($P > 0.05$) ATTD, STTD, or retention of Ca. The