89 Effect of ractopamine level, gender, and duration of Ractopamine on belly and bacon quality traits. S. M. Scramlin*[1], S. N. Carr[2], C. W. Parks[2], F. K. McKeith[1], and J. Killefer[1], [1]*University of Illinois*, *Urbana*, [2]*Elanco Animal Health*, *Greenfield, IN.*

The objective of this study was to compare changes in belly and bacon quality traits in pigs that were fed Ractopamine for various durations of finishing. A complete block design in a 2×3×2 factorial arrangement was used with barrows and gilts, fed Ractopamine levels of 0, 4.5, or 6.75 g/ton, for 21 or 28d. Bellies (n=168) were fabricated at the University of Illinois Meat Science Laboratory and measured for length, thickness, flop, and processing yields. Once processed, 0.6 cm slices were removed at 25, 50, and 75% distance of belly from the blade end, packaged and imaged using a Chem1 Genius2 Bio Imaging System. Images were analyzed by tracing with a magnetic lasso in Adobe Photoshop Elements to determine total slice area (TA), total slice length (TL), secondary lean length (SL), secondary lean area (SA), and percent lean area (TA – all lean components = LA). A composite sample from the three slices was used for proximate analysis to determine percent moisture and percent fat for each belly. Feeding Ractopamine increased belly yield, TA, TL, SA, and LA ($P<0.05$), with no significant effect found for percent moisture or fat ($P>0.05$). Gender effect was significant with gilts having lower flop lengths and higher pump uptakes, additionally gilts had increased TL, SL, and LA with lower percent fat and higher moisture ($P<0.05$). Duration had no significant effect on belly or bacon quality traits ($P>0.05$), furthermore, no interactions were found to be significant ($P>0.05$). Ractopamine administration during finishing resulted in improved belly and bacon yields with no negative effects on quality. Furthermore, the use of the described imaging techniques could be used to develop a bacon grading system using objective imaging to evaluate bacon quality.