

68 The role of carcass length on pork cutting yields. K. A. Varnold*¹, S. F. Holmer¹, D. B. Petry², J. M. Eggert², F. K. McKeith¹, and J. Killefer¹, ¹University of Illinois, Urbana, ²Monsanto Choice Genetics, St. Louis, MO.

Carcass length is frequently measured by different sectors of the pork industry. It is believed that carcasses of longer length will have a higher yield of the valuable middle meats. Yet, there has been limited research to support increased yields with increased length. Therefore, our objective was to determine the relationship of pork cutting yield to some morphometric measurement of a carcass. Forty gilts of similar genetic background were selected at a similar weight, but differing in length. Carcass quality measurements were made the day after harvest. Indicator measurements for cutting yield included carcass length (anterior to the first rib to anterior the aitch bone), rib and vertebrae number, and femur length. Cutting yields were performed on the right side of the carcass according to the North American Meat Processors specifications. Bone-in and boneless product was fabricated and related as a percent of cold side weight. Data were initially analyzed with the Proc Corr procedure in SAS. The correlation to percentage cutting yield was initially evaluated. Principal Components (Proc Princomp: PC) of SAS was used to select the top and bottom five individuals based on carcass length, femur length, and the combination of the two. The two groups were compared with GLM to determine if there was a difference in cutting yield between the extremes for each parameter. All pigs for the trial fell within the live weight range of 118-128kg, with a mean of 123kg. The goal of selecting pigs of similar weight was to minimize the variation in cutting yield of pigs of different weight. Hot carcass weight ranged from 91-99kg and carcass lengths ranged from 80-88cm, with a mean of 84.4cm±1.7. In addition to carcass length, rib# (14-16), total vertebrae (21-23), and femur length (190-212mm) were measured. Simple correlation (r) between morphometric traits and carcass cutting yield resulted in few significant correlations. The number of ribs in the carcass resulted in a correlation of 0.28 (P=0.08) for the yield of back ribs. Neither carcass nor femur length resulted in any significant (P<0.05) correlations with the cutting yields measured. Using the PC method and looking at the extremes in the population for carcass and femur length, few data were significantly (P<0.05) different. The data indicated carcasses within the group with increased carcass length, had an increase in yield of Canadian back from 7.5% to 8.2% (P=0.0515). In addition the light butt was also increased in the group with the longer carcass (P=0.0525). In contrast, the group with a shorter carcass had a higher yield on the trimmed belly (P<0.05). The difference in the two groups at the end of the distribution for femur length resulted in no differences. This data indicates that there may be some difference in cutting yields at the tail ends of a distribution, when evaluating carcass length. However, over a population of pigs of similar weights, there is little impact on cutting yield with rib or vertebrae number, femur length or carcass length.