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COMMUNICATING RETAIL VALUE IN THE MARKETPLACE II: PORK AND LAMB CARDS SOFTWARE PACKAGES

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INTRODUCTION

Price competition has forced the retail meat industry to focus on new merchandising strategies to ensure adequate profitability. What was needed was an easy-to-use software program to evaluate purchase and merchandising options at both wholesale and retail levels. The software, Computer-Assisted Retail Decision Support for beef (Beef CARDS, Garrett et al., 1991), provided a standardized base for value comparisons in the beef industry. The development of Beef CARDS lead for the need of similar computer programs by the pork and lamb industries.

Pork, as retailed, is leaner today then ever before (Buege et al., 1989). With this small amount of fat being sold at retail, packers have taken the lead in reducing fat on boxed pork cuts and now sell primals and subprimals with .64 cm or less external fat. With fat trim being less valuable for pork retailers, merchandising options are more critical. Buege et al. (1989) reported that most pork was still being merchandised in a traditional, bone-in manner. For pork to compete more favorably against other protein foods, more attention must be paid to innovative merchandising techniques that will allow consumers to be motivated to purchase more pork and, ultimately, to increase profitability to the pork industry.

Lamb is currently sold as traditional, bone-in retail cuts which are presented to the consumer with little external fat cover (Harris et al., 1990). However, wholesale lamb can be purchased as a traditional carcass or 3-piece box, or as more innovative, vacuum packaged subprimals. Although yields of innovative and traditional subprimals have been investigated (Garrett et al., 1990, 1992), little information exists for innovative and traditional retail fabrication styles.

The needs of the pork and lamb retail industries differ from beef due to the way these commodities are traded. This study was conducted to obtain the necessary information to develop individual CARDS software packages to reflect the needs of the pork and lamb industries.

EXPERIMENTAL METHODS

Various retail fabrication styles were designed to reflect innovative and traditional cutting methods with input from Texas A&M University and Texas State Technical College personnel and the National Live Stock and Meat Board Retail Advisory Committee comprised of major wholesalers, retailers, and packer entities

Boxed pork was obtained to represent four different purchasing specifications common in the industry to conduct a study on yields and labor requirements. Boxes of bone-in loins (n = 180), boneless loins (n = 94), Boston butts (n = 148), fresh hams (n = 28), and boneless hams (n = 23) were shipped to Texas A&M University. Subprimals within each purchasing specification were allotted randomly to cutting styles.

Ninety-four lamb carcasses were obtained from five major packing plants representing different geographical regions of the United States. Carcasses were shipped to Texas A&M University and allotted to carcass (n = 20), 3-piece box (n = 22), or subprimal (n = 52) wholesale purchasing options to determine yields and labor requirements. Carcasses then were fabricated and packaged as required to meet purchasing options.

To perform cutting yields and time tests, a simulated retail cutting room was designed according to Garrett et al. (1991). Cutting data collected included initial subprimal, retail cut, fat, lean trim, and bone weights. All of the processed weights were reconciled to 99% of the initial subprimal weight. Additionally, number of retail cuts was recorded. Timing data for pork included box to table (opening vacuum bags and unwrapping subprimals), pre-trimming (trimming the fat to produce an even layer no more than .64 cm thick), retail cutting (producing the retail products), trimming (producing a consumer desired retail product and upgrading the trim to a lean product, with no more than .32 cm fat trim) and traying (placing the individual retail cuts on plastic foam trays). Timing data for lambs included breaking (fabricating into wholesale cuts - legs, loins, racks, and shoulders), box to table, retail cutting, trimming (.32 cm fat trim) and traying, and upgrading lean trim. To determine the value of traditional and innovative cutting styles, prices from one retail chain and the USDA National Carlot Meat Report were obtained. CARDS software was employed to calculate retail value.

Statistical analysis included the generation of means and standard errors to serve as the data base for the computer software package. Class comparisons were made using Tukey's mean separation procedure (Lentner and Bishop, 1993).

PRINCIPAL RESULTS

Pork CARDS. Cutting times were increased up to three-fold when bone-in subprimals were taken to boneless endpoints. Cutting style affected ($P < .05$) retail yield, total processing time, and value differential (US $/.4536 kg) for bone-in loins. Cutting time and value for boneless loins differed ($P < .05$) by cutting style. Boston butt retail yield and cutting time were affected ($P < .05$) by cutting style. When cutting styles within subprimals were pooled, bone-in loin, boneless loin, Boston butt, and outside fresh pork leg percentage of retail yield were influenced ($P < .05$) by purchasing specification. Purchasing specification affected ($P < .05$) processing time for bone-in loins, boneless loins, fresh hams, inside fresh pork leg, and outside fresh pork leg. Value differential was impacted ($P < .05$) by purchasing specification for bone-in loins, boneless loins, Boston butts, and inside fresh pork leg.

Purchasing specification, cutting style, and the interaction of the two affected profit and gross margin percentage as determined by Pork CARDS. Pork CARDS is a flexible package that runs within the Microsoft Windows environment. A companion computer manual guides the user through this program and introduces some of the unique features. A user can build on a given data base and customize the program by adding input information such as labor rates, subprimal costs, retail prices, and cutting tests. The computer software allows a retailer to make informed purchasing decisions that were previously time consuming by simplifying yield and labor-cost calculations, and allows better consideration of alternative purchase and merchandising options than was previously possible.

Lamb CARDS. It was concluded that retail yield decreases and total processing time increases for innovative versus traditional fabrication methods when a comparison is made within subprimal. When wholesale purchasing options were compared, total retail yield did not differ ($P > .05$). Subprimals had a shorter ($P < .05$) total processing time than lambs fabricated as whole carcasses or 3-piece boxes. Increasing time required to perform innovative processing procedures would dictate that retailers need to determine what they can increase price to compensate for the loss of time and yield. Lamb CARDS can assist retailers in determining estimates of what those numerical values may actually be.

One feature of the software package allows the user to determine retail prices that maintain a standard profit level (US $/45.36 kg sold). For this comparison, the traditional cutting styles and USDA National Carlot Meat Report prices were used to establish a standard profit level. Lamb CARDS was used with cutting test data, standard subprimal costs, and standard prices for lean trim to determine average retail prices for innovative cutting styles. Innovative cutting styles for shoulders, racks, loins, and legs required retail prices to increase an average of 3.5%, 22.8%, 16.0%, and 16.6%, respectively, compared to base price to maintain a constant profit level. The greatest change in retail price occurred in the rack where the most innovative cutting style required an increase in average retail price of 28.3% compared to the base style. The Lamb CARDS program revealed that pricing for some innovative cutting styles may be prohibitive due to dramatically reduced yields and increased labor requirements which resulted in extremely high retail prices.

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