

required for many operations, particularly larger operations, to maintain country of origin information on cattle that move through their operations. Segregation of animals by origin may be implemented at some operations to facilitate recordkeeping, and additional labor likely will be needed to tag or otherwise identify animals, record information, and transfer information to purchasers. Considering all producer segments together, USDA adopts \$10 per head as an upper range estimate of costs to cattle producers to implement the proposed rule. This estimate reflects USDA's expectation of relatively small implementation costs at the cow-calf level of production, but relatively higher costs each time cattle are resold. Typically, fed steers and heifers change hands two, three, or more times from birth to slaughter, and each exchange will require the transfer of country of origin information. Thus, total upper range costs for beef producers are estimated at \$368 million.

For intermediaries in the beef sector, Sparks/CBW estimates costs of \$15 per head to \$18 per head for packers and processors of steers and heifers and \$4 per head for cows and bulls for a total of \$429 million to \$546 million. Assuming commercial beef production of about 26 billion pounds for the 35 million head of cattle included in the Sparks/CBW estimates, estimated costs per pound are \$0.017 to \$0.021. Davis estimates costs of \$11 million per plant for the 43 largest beef packing plants, resulting in a national total of \$473 million. Assuming that these plants account for about 90 percent of total U.S. commercial beef production of about 27 billion pounds in 2002, this estimated cost works out to \$0.0195 per pound.

USDA expects that intermediaries will face increased costs associated with tracking cattle and the covered beef commodities produced from these animals and then providing this information to subsequent purchasers, which may be other intermediaries or covered retailers. Plain and Grimes estimate that 88.7 percent of the supply of steaks and roasts and 75.5 percent of the beef trimmings used to produce ground beef for U.S. consumption were U.S. born, raised, and slaughtered beef in 2002 (Ref. 7). Thus, substantial portions of the beef supply are from sources not meeting the definition of U.S. born, raised, and slaughtered. Consequently, incremental costs for beef packers likely will include additional capital and labor expenditures to enable cattle from different origins to be segregated for slaughter, fabrication, and

processing. Considering the costs likely to be faced by intermediaries in the beef sector, USDA adopts \$0.02 per pound as an estimate of upper range costs, which is consistent with estimates from the available studies. Total upper range costs are thus estimated at \$538 million.

Sparks/CBW estimates costs of \$0.09 to \$0.12 per pound for beef retailers, with a total of \$805 million estimated for 8 billion pounds of beef sold assuming a cost of \$0.10 per pound. FSIS estimates the cost of retail labeling at approximately \$0.005 per package (Ref. 31), which is strictly the cost to apply a label and does not include costs such as recordkeeping or product segregation and tracking. Davis estimates total costs of \$428,500 per retail store to implement mandatory COOL for beef alone, for a total of \$4.6 billion nationally. Several supermarket retailers commented on the guidelines for voluntary country of origin labeling (67 FR 63367) and estimated costs to implement country of origin labeling at about \$26,000 to \$54,000 per store for all covered commodities (Refs. 32, 33, and 34). These estimates are an order of magnitude less than Davis' estimated cost per store, suggesting that the estimate of \$428,500 per store for beef alone is substantially overstated. A comment from another retailer estimated costs of \$0.075 to \$0.08 per pound just for labeling and recordkeeping for beef, pork, and seafood at retail (Ref. 35). USDA adopts \$0.10 per pound as an upper range estimate of implementation costs for beef retailers, for a total of \$780 million. This figure reflects the costs for individual package labels, meat case segmentation, record keeping and information technology changes, labor, training, and auditing. In addition, there likely will be increased costs for in-store butcher department operations related to cutting, repackaging, and grinding operations.

Total costs for affected entities in the beef sector are thus estimated at \$1.7 billion.

For pork producers, Sparks/CBW estimates costs at approximately \$1 per head for all types of production systems. Sparks/CBW takes into account cost efficiencies associated with integrated production and processing systems and large-scale production. Hayes and Meyer estimate costs at \$2 per head for all producers. Both the Sparks/CBW and the Hayes and Meyer studies appear to account credibly for the cost increases that pork producers are likely to encounter. Therefore, USDA adopts the midpoint of the per-head costs estimated by these two studies as the estimated upper range costs for pork

producers. With annual slaughter of 100.3 million head, total costs for producers are estimated at \$150 million.

For processors, Sparks/CBW estimates costs at \$2 to \$6 per head for non-integrated hog packers, \$0.50 per head for vertically integrated hog production and packing systems (including costs associated with hog production), and \$2 per head for sows and boars. In the Sparks/CBW study, vertically integrated systems account for approximately 26 percent of total slaughter hog production. For all processors, the Sparks/CBW study estimates total costs of \$158 million to \$450 million, assuming that half of the costs per head for vertically integrated production and packing accrue to the packing operation. Based on 2002 commercial pork production, the Sparks/CBW cost estimates range from \$0.008 to \$0.023 per pound. Hayes and Meyer estimate processing costs at \$6.10 per head for all packers, which implies total costs of \$612 million based on slaughter of 100.3 million head or costs of \$0.031 per pound based on 2002 commercial pork production. USDA believes that upper range costs for all pork sector intermediaries (including handlers, processors, and wholesalers) will be similar to costs for beef sector intermediaries. USDA therefore estimates upper range costs for pork industry intermediaries at \$0.02 per pound, for a total of \$368 million.

For retailers, Sparks/CBW estimates costs for pork at \$0.055 per pound at the retail store level and \$0.02 to \$0.03 per pound at the retail distribution center, for a total of \$0.075 to \$0.085 per pound at the retail level. Hayes and Meyer estimate retail costs at \$1.87 per animal, or \$0.01 per pound. As noted previously, FSIS estimates the cost of retail labeling at approximately \$0.005 per package for the label alone (Ref. 31). Taking these sources into consideration, USDA estimates upper range costs for retailers of pork at \$0.07 per pound. USDA's upper range per-pound cost estimate for pork is lower than for beef primarily to reflect the higher costs incurred by in-store grinding operations to produce ground beef. Although ground pork may also be produced in-store, most ground pork is processed into sausage and other products not covered by the proposed rule. Total estimated costs for pork retailers are \$155 million. Total upper range costs for the pork sector are estimated at \$673 million.

USDA did not identify any quantitative analyses of costs of mandatory COOL on the lamb industry, other than the paperwork burden estimates developed by VanSickle, *et al.*