

The estimated changes in prices and production cause revenues for the fruit and vegetable industry to decline an estimated \$12 million to \$18 million. The estimated changes in production and prices cause revenues to beef cattle producers to fall \$28 million and revenues from production and sale of beef to fall an estimated \$70–\$62 million dollars. In addition, revenues to hog production fall slightly, down \$2 million to \$8 million and revenues from production and sale of pork fall \$58 million to \$68 million. Finally, revenues to the fish industry fall \$5 million to \$12 million.

While revenues to the suppliers of the covered commodities fall, revenues to broiler and chicken suppliers increase. This is because the quantity of chicken demanded increases as consumers reduce their consumption of beef and pork in response to the increase in prices. The resulting changes in chicken and broiler production and prices, however, are relatively small (Table 10). The increase in both chicken and broiler prices is less than one cent, while broiler production increases by up to 1 million birds and chicken production increases by up to 23 million pounds. The increases in prices and production will cause revenues for broiler production to increase by an estimated \$3 million to \$8 million and revenues from chicken production to increase an estimated \$26 to \$94 million.

The increase in the prices of all affected commodities (except for fish) causes both exports and imports to decline (Table 10). Although these declines are small, they are for the most part smaller than the declines in U.S. production of these commodities, except for chicken where U.S. production increases.

The results presented here are based on one possible modeling framework. Consequently, the results depend on the representation of supply and demand relationships embedded in the ERS CGE model. Other types of modeling frameworks likely would yield different results. Unless these frameworks, however, are comprehensive in their coverage of both covered commodities and the linkages of these industries to the rest of the U.S. and world economy, their results would only represent the outcomes from a partial or incomplete adjustment of the economy to COOL. While their analysis may be useful for identifying the key factors for determining how specific industries or sub-sectors would be affected, they would not be useful for determining the effects of COOL on these industries and sub-sectors after the U.S. economy has completely adjusted.

Other CGE models that are as detailed in their coverage of the covered commodities as the ERS model may also provide different results than the ones presented here. In particular, the direction of change in the prices received by hog, cattle and fruit and vegetable producers may change if these models make a different assumption about the ability of firms to influence input and output prices. The ERS CGE model assumes that firms behave as though they have no influence on either their input or output prices. On the other hand, for example, a model that assumed that processors could influence their input and output prices could find that prices received by agricultural producers decreased because processors passed their cost increases down to their suppliers rather than increase the price they charged their customers.

Finally, the estimates of the economic impact of the proposed rule on the United States are based on the assumption that country of origin labeling does not shift consumer demand toward the covered commodities of U.S.-origin. This assumption is based on the earlier finding that there was no compelling evidence to support the view that mandatory country of origin labeling will increase the demand for U.S. products. Despite this lack of evidence, we examined how much of a shift or increase in demand for U.S.-origin labeled commodities would have to occur to offset the costs imposed on the economy by the proposed rule. We found that consumer demand for the covered commodities would have to increase from 0.4 percent to 2.1 percent to offset the costs to the economy of COOL as outlined in the proposed rule.

The 0.4 percent to 2.1 percent increase in demand for covered commodities represents the overall increase in demand from all outlets. If there were such a demand increase for domestically produced covered commodities, however, it would presumably occur at those retailers required to provide country of origin information. As previously discussed, USDA estimates the percentage share of covered commodities sold by retailers subject to this proposed rule at 41.4 percent of total consumption. This suggests that demand at covered retailers actually would have to increase by 1 percent to 5.1 percent, assuming no change in demand at other domestic outlets or in export demand.

As previously mentioned, our estimates of the overall economic effects of the proposed rule are derived from a CGE model developed by ERS. The results from this model show the

changes in production and consumption patterns after the economy has adjusted to the incremental increase in costs (medium run results). In reality, such changes occur over time and the economy does not adjust instantaneously.

The results of this analysis describe and compare the old production and consumption patterns to the new ones, but do not reflect any particular adjustment process. In addition, these results assume that the only changes that are occurring in the agriculture sector or the economy as a whole are those that are driven by COOL. The purpose of using the ERS CGE model is not to forecast what prices and production will be over any particular time frame, but to explore the implications of COOL on the U.S. economy and capture the direction of the changes.

The ERS CGE model is global in the sense that all regions in the world are covered. Production and consumption decisions in each region are determined within the model following behavior that is consistent with economic theory. Multilateral trade flows and prices are determined simultaneously by world market clearing conditions. This permits prices to adjust to ensure that total demand equals total supply for each commodity in the world.

The general equilibrium feature of the model means that all economic sectors—agricultural and non-agricultural—are included. Hence, resources can move among sectors, thereby ensuring that adjustments in the feed grains and livestock sectors, for example, are consistent with adjustments in the processed sectors.

The model is static and this implies that gains (or losses) from stimulating (or inhibiting) investment and productivity growth are not captured. The model allows the existing resources to move among sectors, thereby capturing the effects of re-allocation of resources that results due to policy changes. However, because the model fixes total available resources it underestimates the long-run effects of policies on aggregate output.

The ERS CGE model uses data from the Global Trade Analysis Project (GTAP database, version 5.2). The database represents the world as of 1997 and includes information on macroeconomic variables, production, consumption, trade, demand and supply elasticities, and policy measures. The GTAP database includes 57 commodities and 76 country/regions. For this analysis, the regions were represented by the following country/regions: the United States, Canada,