

# Changes with observed prices and quantities until 2009 and then model estimates from 2010

I estimate the price and quantities with the additional costs to the model estimates. These are compared with the model estimates and the observed data. I compute the percentage changes in the price and quantity for fed cattle, cull cows as well as the aggregate producer surplus. The results are as follows:

Table 1: Percentage change in price of fed cattle

Year	percentChange_ps_obs	percentChange_ps_model
2010	-2.058	6.547
2011	-12.339	3.668
2012	-1.357	2.506
2013	3.168	3.573
2014	-14.713	2.713

Table 2: Percentage change in quantity of fed cattle

Year	percentChange_sl_obs	percentChange_sl_model
2010	3.5945	3.0673
2011	1.5390	1.1891
2012	-2.0401	0.7200
2013	2.2449	1.9418
2014	-1.3540	1.1778

Table 3: Percentage change in price of cull cows

Year	percentChange_pc_obs	percentChange_pc_model
2010	-28.411	-4.600
2011	-24.199	1.021
2012	-11.938	1.659
2013	-3.749	-0.674
2014	-24.573	0.625

Table 4: Percentage change in quantity of cull cows

Year	percentChange_cl_obs	percentChange_cl_model
2010	23.2497	23.9647
2011	18.8652	8.8946
2012	13.5344	4.9771
2013	5.3688	14.9451
2014	24.3446	8.4494

Table 5: Aggregate producer surplus

Year	diffRevCost_t_obs	diffRevCost_t_model
2010	-0.6205	1.3899
2011	-3.8432	0.4694
2012	-1.7107	0.2171
2013	0.7793	1.1148
2014	-6.1877	0.5618