Abstract

I simulate growth and quality changes for pens of cattle and derive the value of pre-harvest sorting and genetic selection under grid pricing in a deterministic setting featuring animals with heterogeneous growth and quality maturation paths. The key findings are: (1) both pre-harvest sorting and increased genetic uniformity could substantially affect an individual cattle feeder's net revenues; (2) one could expect higher marginal revenue gains from the genetic uniformity than from pre-market sorting; (3) both methods exhibit diminishing marginal returns and (4) aggregate beef supply may increase as improving uniformity typically leads to later optimal marketing dates and, hence, heavier animals at slaughter.

Post-slaughter quality-based pricing of cattle is increasingly common. This quality, however, is dependent upon unobservable quality characteristics of the feeder cattle used as inputs and unverifiable effort exerted by feedlot managers. Through stochastic simulation I construct incentive compatible quality risk-sharing contracts based upon final grid-quality schedules in feeder cattle markets.

Darby and Karni suggest branding as means of solving the potential fraudulence problems in the credence good market. Umbrella branding is a common marketing practice to promote new product and bond the product quality to the brand reputation. However, while umbrella branding works well in the experience good market, no evidence shows it would work in the credence good markets. I set up a framework for discussing the effect of umbrella branding on the quality provision of credence good. The results show that brand reputation, product similarity, probability of detection, punishment severity, and exogenous quality noise all play important roles in determining a firm's decision on umbrella branding and fraud.