论文

考虑流通损耗的生鲜农产品零售商期权订货策略

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Fresh produce retailer's optimal options contracts procurement decisions research with circulation wastage

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- 摘要
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摘要 针对生鲜农产品在流通中产生巨大损耗的特性,引入期权合同研究单周期两阶段的零 售商最优订货策略. 分别建立向单个供应商订购期权和同时向两个供应商订购期权 的订货模型,以最大化期望利润为目标,得到零售商的最优订货量和最大期望利润 都存在并且是唯一的. 通过模型比较得到: 零售商同时向两个供应商订货时的最优 总订货量大于等于分别向单个供应商订货时的最优订货量,零售商同时向两个供应 商订货时的最大期望利润大于分别向单个供应商订货时的最大期望利润. 由数值分 析得到: 向两个供应商订货的最大期望利润与产品损耗率、期权成本差价和期权 执行价格差价均成反比.

关键词: 生鲜农产品   流通损耗   期权合同   供应链风险管理

Abstract: This paper considers the fresh produce with two stage model, taking the huge circulation wastage into account, and discusses the optimal procurement decisions for a stochastic demand environment from retailer in one period. With the objective of maximizing the profit models both procuring from one supplier's and procuring from two suppliers' options contracts, paper get each optimal ordering quantity and the maximum profit is exist and only. The conclusions after models comparing are following, the optimal total ordering quantity of the retailer who procuring from two suppliers' options contracts is not less than the optimal ordering quantity of procuring from one supplier's, and the maximum profit of the retailer who procuring from two suppliers' options contracts is more than the profit of procuring from one supplier's. And the conclusions after numerical study are following, the maximum profit which procuring from two suppliers is negative correlative to the circulation wastage rate, the price difference of options cost and the price difference of options trading price.

Key words: fresh produce   circulation wastage   options contracts   supply chain risk management

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