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**A hidden Markov model for an inventory system with perishable items.** (English)

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**Summary:** This paper deals with a parametric multi-period integer-valued inventory model for perishable items. Each item in the stock perishes in a given period of time with some probability. Demands are assumed to be random and the probability that an item perishes is not known with certainty. Expressions for various parameter estimates of the model are established and the problem of finding an optimal replenishment schedule is formulated as an optimal stochastic control problem.

**MSC:**

- [60K30](#) Applications of queueing theory (congestion, allocation, storage, traffic, etc.)
- [60J10](#) Markov chains (discrete-time Markov processes on discrete state spaces)
- [90B05](#) Inventory, storage, reservoirs

Cited in **2** Documents

**Keywords:**

inventory control; perishable items; Markov models; measure chain techniques

**Full Text:** [DOI](#) [EuDML](#)