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Evaluation of the Distribution Aspect of Inventory and Losses Via the Use of Scanner Data

by

Andrew J. Groff
Undergraduate Research Assistant
Department of Food & Resource Economics
University of Delaware
Newark, DE

J. Richard Bacon
Research Associate
Department of Food & Resource Economics
University of Delaware
Newark, DE

U.C. Toensmeyer
Professor
Department of Food & Resource Economics
University of Delaware
Newark, DE

Charles L. Goulston
Industrial Engineer
USDA, AMS, TMD, DSB
Washington, DC

Objectives

The overall objective is to evaluate fresh produce delivery scheduling, consumer buying patterns, and loss control techniques through the use of scanner data from selected supermarkets in Delaware and portions of Southeast Pennsylvania. Specifically this project will:

1) Determine potential uses of scanner-derived information for managerial decision-making in regard to delivery scheduling and inventory control; and

2) Determine consumer buying patterns of selected fruits and vegetables and assess the impact of prices and advertising on the in-store losses of these products as related to the stores' delivery scheduling practices.

Justification

Many retailers, especially small independent operators, lack the analytical skills to fully use their scanner data bases. Small independent retail chains, who may operate several conventional supermarkets, still do not know how to use their

scanner data for inventory control or how to link physical distribution and demand analysis.

Retailers could make use of these elasticities to determine their delivery scheduling and inventory control program, assess the impact of promotional activity on distribution and optimal space allocation, and to develop sales management models to control physical distribution. Using selected fresh produce items, this study will provide important information on the potentials locked within this data source for the small retail stores and/or chains in the food industry.

Procedure

The source of the scanner data for this research effort is from two small independently owned retail food firms, under the "Thrift Way" name, in Delaware and portions of Southeast Pennsylvania consisting of several conventional supermarkets representing both rural and urban markets. The data to be collected comprises approximately 168 different fresh produce items plus their corresponding value added products. The research will concentrate initially on several major fruits and vegetables such as tomatoes, lettuce, apples, and other leading sales items.

Specific data to be obtained for this study will consist of the following:

1) Quantity of produce received in shipment to a store as well as quantity sold and prices received;

2) Information on payday and seasonal factors will be collected;

3) Retailer's non-price offer variations such as advertising and sales promotion activities, hours open, and customer services;

4) Data will be collected by store on a weekly basis for a minimum of 18-24 months, using client and University computer facilities;

5) Daily information will be aggregated into weekly information to make computational matters more manageable and also to smooth out variability;

6) The aggregated data will allow the analysis of store distribution operations such as weekly delivery scheduling, inventory purchases, price, and promotional changes. Also, weekly data is compatible with previously published studies;

7) PC compatible computer software will be developed to properly analyze the scanner data and will be made available to all concerned.