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UNITIZED POTATO SHIPMENTS ON MOBILE CARTS

by
Gene J. D'Ovidio
Senior Industrial Engineer
The Stop and Shop Companies, Inc.

Background and Introduction

Market Trends - Potatoes represent 20% of total tonnage, one of the highest priced items sold in a produce department, annual consumption up 27% in the past 15 years, fresh sales depend on quality and displays.

Present System - Potatoes are grown and packed at three major locations - Long Island, Maine, and California (packed by local packer). 5# and 10# bags are utilized into 50# master containers and loaded onto pallets - 1000# per pallet. Also 10# bags are loaded directly into wooden bins - 1000# per bin. Bins and/or pallets are shipped via truck to distribution centers. Average payload is 40,000#. Potatoes are stored and distributed in 1000# quantities to retail stores - all loading and unloading by pallet jack. Potatoes are handloaded onto display rack and master container disposed of when present.

Objectives

Design a more efficient system of distribution.

Solve problem areas:

1. Handling at packer level
2. Handling at distribution level
3. Handling at retail level
4. Truck cube utilization
5. Coordination of requirements
6. Pallet and/or bin cost
7. Master container cost
8. Product rotation at retail level
9. Product quality

Results

Introduction of a mobile cart: Zinc chromate plated steel construction. The cart rides on four (4) casters; two fixed and two swivel for ease of tracking. The cart is also collapsible for backhauling and storage purposes.

The load capacity of the cart is 1100#: 110-10# bags of potatoes.

The total payload on a standard 40' trailer remained at 40,000#.

From an economic standpoint, the cart presents an attractive return on investment. Based on an initial cost of \$125.00 per cart, a life of 5 years, and zero (\$0) salvage value, the materials cost to deliver 1000# of potatoes is \$.94. Compared to a pallet cost of \$.50/trip and a master container cost of \$2.50/trip, the cart reduces materials cost by 66%.

Labor costs at packer and distribution level are unchanged. Labor cost at the retail level is greatly reduced. Through time study and flow process analyses, it was determined that it required 30-45 minutes per 1000# to handle potatoes delivered on pallets or in bins. Delivery on carts reduced this labor cost by 60-70%. What was previously a tedious and time-consuming function became a quick and easy task.

Product quality was monitored at the distribution level. The number of torn bags and bruised product was recorded for potatoes delivered on carts. Compared to

the existing system, the carts presented a slight advantage in this area. There was no decrease in the quality of received product.

A very distinct advantage in cart delivery was product rotation at store level. By the old methods, product was removed from the display fixture bag by bag - then reloaded bag by bag on top of the new product. Through cart delivery, product rotation is simplified and encouraged. All the product is removed in one motion as the old cart is pulled from the display area and then the product is reloaded bag by bag.

There are other benefits of the cart delivery system. The time during

which the potato area is congested and unavailable for sales is reduced. This becomes especially significant during peak selling hours when there are many customers in the sales area. Cleaning is made easier since the cart can be rolled out and the floor swept quickly while a permanent fixture can only be cleaned when empty.

In conclusion, a cart delivery system for potatoes has many advantages. With the rising cost of pallets, bins, and master containers, the economic trade-off between metal and wood becomes more significant. The rising cost of labor makes the productivity increases at store level more attractive. In short, the inflationary economy we now face can only improve the potential of this system.

ESTIMATING FINANCIAL STATEMENTS OF THE ENTIRE SUPERMARKET INDUSTRY - PHASE 1

by
Eugene E. Gerke
Manager, Economic Analysis
Super Market Institute
Chicago, Illinois

Introduction

The very nature of the supermarket industry, selling the end result of the food production, processing and distribution system, puts it in continuous contact with the consuming public. No other sector of the food industry is so vulnerable to public, media, and political reaction. Any such reaction is often the result of factors the supermarkets cannot control (e.g., escalating raw commodity prices, rising processing costs, etc.). This crucial industry is very sensitive to economic and political factors. There is a great need for reliable data on the economic performance of the industry.

There are several sources of data on super market industry performance. Some examples are Progressive Grocer's Annual Report of the Grocery Industry, Cornell University's Operating Results of Food Chains, The Fortune 500 Annual Report, and Super Market Institute's Industry Speaks. These reports are all good sources of performance data for the industry, but there is no single source of financial data for the entire supermarket industry.

Objective

The overall purpose of this project is to provide timely and accurate data on supermarket industry performance, based