FACTORS AFFECTING CONSUMERS' CHOICES AMONG TYPES OF POTATOES: A MULTINOMIAL LOGIT ANALYSIS

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Abstract

Potatoes are marketed by type (e.g., round white, russet, long white, red). A better understanding of the determinants of consumers' choices among types of potatoes is crucial to the success of the industry's marketing efforts in areas of product development, merchandising and advertising. This study identified three important factors corresponding to consumers' potato purchasing decision—preparation method, the number of different ways consumers prepare the potatoes, and the age of the consumers. A multinomial logit model was used in the study.

Compendio

La papa es comercializada por tipos (ej. blanca redonda, rojiza, blanca, larga, roja). Un mejor conocimiento de las determinantes de las preferencias de los consumidores por los tipos de papa es crucial para el éxito de los esfuerzos de comercialización industrial en zonas de desarrollo, mercadeo y publicidad del producto. Este estudio identificó tres importantes factores correspondientes a la decisión de compra de los consumidores—método de preparación, el número de diferentes maneras en que los consumidores preparan la papa y la edad de los consumidores. En el estudio se utilizó un modelo de análisis multinomial de la relación dosis/respuesta ("logit").

Introduction

Potatoes are the largest vegetable crop grown in the United States. The total U.S. production of potatoes, on a farm weight basis, has increased 18 percent, from 14.8 million metric tons in 1970 to 17.5 million metric tons in 1987. During the same period, U.S. per capita potato consumption remained relatively constant at about 54.4 kilograms farm weight, or 34 kilograms, retail weight (Putnam, 1989). Maine is among the five top ranking potato producing states, and is the predominant producer of round white...
Potatoes. However, changes in buyer behavior have led to a decline in eastern market shares previously held by Maine growers to the benefit of northwestern producers. This is attributed to consumers growing preference for russet over round white potatoes (National Food Review, 1986).

In order for the Maine potato industry to retain its current customer base and successfully compete for lost market shares, the needs and motivations of the consumers need to be carefully evaluated. This requires a better understanding of the characteristics of the different consumer groups. In previous produce marketing research, segment analysis of distinct consumer groups has primarily been an ancillary component. Many studies have focused on the product attributes relative to a wide number of dependent variables, including satisfaction with produce, reasons for purchasing, and preferences for branding or growing region. Several studies have looked at the characteristics of users of a single commodity, such as the studies conducted for the National Potato Board to assess overall consumer use and attitudes about potatoes in general (NFO Research, 1985). Others have compared consumer preferences for different product groups. For example, some studies have compared the characteristics of those who regularly purchase broccoli versus nonpurchasers, or those who buy apples more often than bananas (The Packer, 1987, 1988, 1989; Eastwood, Brooker and Orr, 1987; Bacon, Toensmeyer, and Shippy, 1985). In a similar vein, a substantial amount of research has been done to investigate the characteristics of those who buy locally grown produce (Brooker, Stout, Eastwood and Orr, 1987; 1986).

Potatoes, like many other vegetables, are marketed by type (e.g., round white, russet, long white, red). In the analysis of consumer behavior relating to vegetable consumption, few studies have analyzed how variations in consumer characteristics are associated with consumer preferences for different types of a particular produce item. Kezis et al (1979) analyzed the differences in characteristics between consumers preferring either Maine or Idaho potatoes. It was found that consumers in the Northeast had a preference for potatoes based on origin of the product and preferred methods of preparation of potatoes.

The primary objective of this study is to assess the differences in consumer characteristics and their impacts on the type of potatoes purchased; types considered were round white, russet, or both round white and russet. As the predominant producer of round white potatoes in the U.S., the Maine potato industry could benefit by using this information to guide its marketing efforts in areas of product development, merchandising and advertising.

Data

The Data Base

The data used in this analysis were obtained as part of a research effort to determine if consumer acceptance of Maine potatoes in home use