Costs of refined-grain products compared to whole grain-rich foods for a California purchasing cooperative

Lynnelle Grumbles, MS, RD, SNS

Catherine Strohbehn, PhD, RD, CP-FS

Introduction

•The Healthy Hunger-Free Kids Act (HHFKA) of 2010 required USDA school meal program menus meet Dietary Guidelines for Americans (DGA).
•New regulations for school lunch implemented July 1, 2012 required increased quantities of fruits, vegetables, whole grains, and fat-free and low-fat milk.
•At least 50% of the grain in a "whole grain-rich" food must be whole grain with the remaining grain enriched.
•Refined grain products contain less than 50% whole grain with the remaining grain enriched.

Purpose of Study

•Compare costs of refined-grain food products used in USDA school meal programs to products recently reformulated to meet whole grain-rich criteria and consider impact on school districts' budgets.

Literature Review

•2001 – 2004 NHANES study indicated less than 1% of school aged children consumed amounts of whole grain foods recommended by the DGA (Krebs-Smith, Guenther, Subar, Kirkpatrick & Dodd, 2010).
•Dietary modeling study (Keast, Rosen, Arndt & Marquart, 2011) found whole grain food intake would improve if refined-grain ingredients were gradually replaced by whole-grain ingredients in foods commonly consumed by children.

Methodology

•Bid prices for 10 non-commodity refined-grain products and their whole grain-rich counterparts were obtained from the SUPER Cooperative, a large commodity and purchasing cooperative in California.
•Differences between purchase cost per serving of refined-grain and whole grain-rich counterparts were calculated for each product set.

Results

•Serving cost for three whole grain-rich products was less than refined-grain counterparts with a range of -$0.010 to -$0.039 per serving.
•Serving cost for two whole grain-rich products was the same as refined-grain counterparts.
•Serving cost for five whole grain-rich products was more than refined-grain counterparts with a range of +$0.002 to +$0.035 per serving.
•Paired t-tests indicated no significant differences in cost between whole grain-rich and refined-grain products.
•Review of ingredient lists indicated few differences in products other than source of grain.

Implications

•Education and training for school meal program menu planners addressing selection of lower cost food items that meet whole grain-rich criteria will help keep food costs affordable.
•As food manufacturers innovate and reformulate food products, the cost of whole grain-rich items should stabilize.
•Additional funding included in HHFKA with targeted training should assist school meal programs in defraying increased food costs for whole grain-rich products and ensure new nutritional standards are met.

References

Krebs-Smith, S. M., Guenther, P. M., Subar, A. F., Kirkpatrick, S. I., & Dodd, K. W. (2010). Americans do not meet federal dietary recommendations. Journal of Nutrition, 140, 1832-1838. doi:10.3945/jn.110.124826

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