



# PURCHASING DECISIONS FOR COST EFFECTIVE IMPLEMENTATION OF THE DIETARY GUIDELINES FOR AMERICANS

A PUBLICATION FOR CHILD NUTRITION PROFESSIONALS FROM THE NATIONAL FOOD SERVICE MANAGEMENT INSTITUTE

## OVERVIEW

Purchasing has always been at the foundation of effective Child Nutrition Programs. The quality of food served to our nation's children begins with the first contact with the vendor. Effective purchasing can upgrade the quality of food served and reduce waste. Cost-effective purchasing creates more options for school foodservice directors to purchase within their budgets additional fresh fruits and vegetables and other foods necessary to carry out the *Dietary Guidelines for Americans*.

There are three questions that must be answered before an effective purchasing system can be established: Should the school district join in a cooperative or group purchasing arrangement to pool buying power? What will be the drop size or how many items will the vendor deliver, and how will prices be submitted on the purchasing contract? This issue of *INSIGHT* addresses factors to be considered in answering these three questions as well as relating how achievement of the *Dietary Guidelines* places special considerations on the purchasing process. Resources developed to help you become a more skillful purchaser also are mentioned.

## RESEARCH

The National Food Service Management Institute (NFSMI) sponsored research that analyzed purchasing systems commonly used in Child Nutrition Programs (CNPs). This study looked at several aspects of the traditional bid and cost-plus-fixed-fee purchasing systems. The researchers also investigated the cooperative method to administer purchasing systems.

### OBJECTIVE

The objective of the study was to determine the advantages and disadvantages of each type of purchasing system.

### METHOD

Twenty-six school districts in eight states completed the study questionnaires. Four of the states were in the North, and four were located in the South. Eleven districts were primarily using either the line item or bottomline bid systems, eight were primarily using the cost-plus-fix-fee system, and seven districts administered their purchasing system through a cooperative.

### RESULTS

The researchers found that there was no single best purchasing system for all aspects of purchasing such as cost, vendor reliability, and administrative burden. Each purchasing system had its pros and cons. School foodservice directors/supervisors need to know their own requirements and choose their system accordingly. More information related to the results of this study can be found in the article by Heimstra and Jaffe listed on the back.

## PURCHASING DECISIONS

Each school district has the authority to establish its own purchasing system within a few firm guidelines from the federal government. The purchase system must ensure free and open competition among vendors. There must be written specifications for all products purchased, and instructions provided all potential vendors must be identical. Items costing over \$10,000 overall must be formally bid, and cost-plus-a-percentage-of-purchase is not an allowable system. These guidelines exist to ensure that taxpayer dollars are used prudently and that there is fair competition among vendors for federal dollars.

Other decisions are left to the discretion of the school foodservice director/supervisor and the school district. When establishing a purchasing system, three questions need to be answered: Should the school district join in a cooperative or group purchasing arrangement to pool buying power? What will be the drop size or how many items will the vendors deliver? How will prices be submitted on a purchasing contract?

## COOPERATIVE PURCHASING

A purchasing cooperative offers many advantages especially for small and medium-sized school districts. Cooperatives pool buying capacity by negotiating purchasing contracts as one, cooperative buying agency. Vendors are much more likely to "sharpen their pencils" and compete aggressively for the business of several districts than for yours alone. Combined buying power may even influence what is available in the marketplace. Cooperatives also pool the knowledge of buyers who can learn from one another. Each member of a purchasing cooperative brings to the team a knowledge of products and vendor reliability for the collective benefit of all. Members of the cooperative team also have different skills that will help the total effort; for example, a registered dietitian who is a school foodservice director can help the group interpret the nutritional content of convenience food products. This would be particularly helpful when you are trying to evaluate manufacturers' products in relation to the *Dietary Guidelines for Americans* (DGAs).

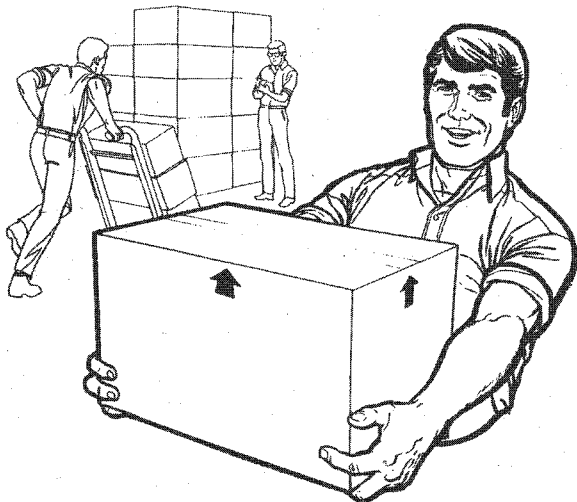
# SHOULD THE SCHOOL DISTRICT JOIN IN A COOPERATIVE OR GROUP PURCHASING ARRANGEMENT TO POOL BUYING POWER?

Joining a cooperative will make it necessary to be flexible and to compromise for the benefit of the total group. Members of a cooperative must agree on the description of products to be purchased and other stipulations in the purchasing contract. This may mean that the pack size or product specifications will change to meet the desires of most, and some members of the cooperative will have to compromise because the team makes decisions for the benefit of the whole group.

The basic philosophy is to provide a winning situation for school districts, food manufacturers, and food distributors. Improved quality, service, and the potential for reduced costs are the benefits school districts acquire. The NFSMI study found that school districts using a purchasing cooperative incurred the least cost for the food items monitored. Identifying customers that purchase in volume is important to manufacturers. Minimizing styles of products that must be stocked and completing fewer bids reduce distributors' costs.

## DROP SIZE DETERMINATION

Regardless whether your decision is to purchase through a cooperative or to maintain single district purchasing, effective purchasing establishes prudent use of school district funds. The traditional system for food purchases involves several elements. Product specifications are required along with detailed instructions to potential vendors on how the prices are to be submitted. If formal bids are used, the invitation to bid must be publically advertised. Price quotes are submitted in writing, and documentation of prices is required. Awarding the bid to specific vendors is based on two methods of calculating or considering price. This calculation determines the drop size or the amount of merchandise any one vendor delivers to the schools.



## LINE ITEM AWARDS

A line item method considers the price of each product independently. The vendor chosen is the one with the lowest price on each item; therefore, there is a high probability that the bid will be awarded to more than one vendor. *Table 1* gives an example of line item awards. In this example Vendor A will deliver peaches, Vendor B will deliver sugar, and Vendor C will deliver pears.

## WHAT WILL BE THE DROP SIZE OR HOW MANY ITEMS WILL THE VENDORS DELIVER?

### BOTTOMLINE AWARDS

The bottomline or all-or-nothing method considers price and estimated quantity to calculate a bottomline price from each vendor for all items bid. Vendor prices on products are weighted by your predicted quantity or volume to be purchased during the time frame of the bid. These weighted prices are then summed for an all-or-nothing total. The bid is awarded to only one vendor, as shown in *Table 2*. Vendor A will deliver all three items because the unit prices from this vendor multiplied by the predicted quantities, or the bottomline price, was less overall.

The cost of delivery is almost the same whether one case or 50 cases are delivered. Line item awards offer the distributor no guarantee concerning the number of cases that will be delivered. School districts frequently receive notices that distributors are placing a minimum invoice amount on all deliveries. Bottomline bid awards make your business more attractive to distributors because the system guarantees increased drop size. Indirect costs such as the cost of processing purchase orders, receiving, and invoice processing also go down with bottomline awarding of bids.

Achievement of the DGAs places increased emphasis on quality fresh produce. Bottomline awards for fresh produce are very appropriate. Delivering fresh product in good condition requires a continuous chilled environment. In many areas of the country the only types of delivery trucks available are equipped for dry or dry and frozen product. Schools may have to consider changing to bottomline awards for fresh produce and requiring refrigerated delivery equipment.

# FIGURE 1

PRODUCT NAME	POTENTIAL VENDOR A	POTENTIAL VENDOR B	POTENTIAL VENDOR C
PEACHES	\$20.36	\$22.94	\$23.41
PEARS	\$22.49	\$23.95	\$22.46
SUGAR	\$19.06	\$18.75	\$21.45

Figure 1. Vendor Award Method: Line Item

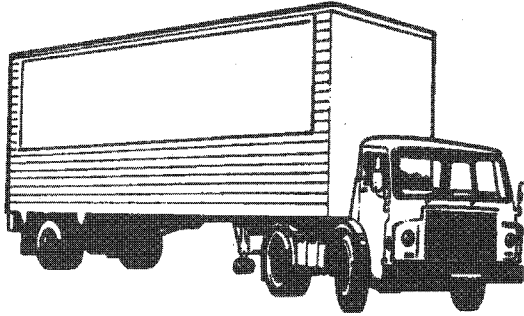
# FIGURE 2

PRODUCT NAME	QUANTITY	POTENTIAL UNIT PRICE	VENDOR A EXTENDED	POTENTIAL UNIT PRICE	VENDOR B EXTENDED	POTENTIAL UNIT PRICE	VENDOR C EXTENDED
PEACHES	25 CS	\$20.19	\$504.75	\$22.02	\$550.50	\$21.50	\$537.50
PEARS	10 CS	\$20.94	\$209.40	\$20.48	\$204.80	\$21.50	\$215.00
SUGAR	15 BGS	\$15.98	\$239.70	\$16.63	\$249.45	\$14.10	\$211.50
<b>BOTTOMLINE TOTAL</b>			\$953.85		\$1,004.75		\$964.00

Figure 2. Vendor Award Method: Bottomline



Once you have decided how bids will be awarded to determine drop size, you must decide how the bidder will submit the price. There are two pricing types: firm prices for a specified time and changing prices based on the distributor's cost. The pricing system chosen by the school district establishes the degree of risk vendors must take when quoting prices. The greater the period requested for firm prices, the greater the risk. The greater the risk, the higher the prices quoted because wholesalers need to cover or "hedge against" rising prices when they go into the marketplace to purchase food and supplies over a longer period.



## FIRM PRICING

Firm-price contracts work best when they are limited to one-time delivery or short-term contracts. Very low volume items such as spices and food coloring could easily be placed on a firm price bid with an effective period of a week or 10 days. The products would be ordered for delivery all at the same time, or if several sites are involved, over several days. The school district decreases its paperwork, and the vendor's risk of cost increases over a longer time is minimized. If the school district operates a warehouse, short-term firm pricing lowers the risk to the vendors, who should give the district better price quotes.

If your school district chooses firm pricing, then the length of the bid period should be carefully considered. Remember, the longer the firm price is requested, the higher the cost. You could consider putting a clause in the bidding instructions that would protect the vendor from unexpected cost increases. The vendor could provide proof from an objective source, such as a market bulletin, of a substantial price increase. The school district could agree to stop purchasing the item, or release the vendor from the contract and obtain new price quotes for the item. Sometimes contracts are written to provide an escalating price based on the market. Milk contracts are a prime example where the price is allowed to vary based on wholesale prices of milk plus an agreed-upon markup. The wholesale prices should be specific to your geographical region. These examples illustrate the principle that schools need distributors who sell and

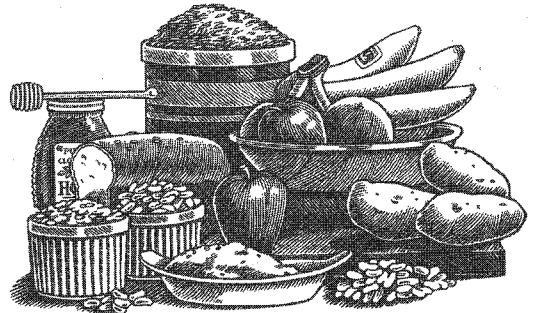
## HOW WILL PRICING BE SUBMITTED ON A PURCHASING CONTRACT?

deliver food to stay in business, and companies are in business to make a profit. Taking reasonable measures to protect both school districts and distributors creates mutually beneficial situations.

## REIMBURSABLE COST-PLUS-FIXED-FEE PRICING

This system allows vendors to quote the cost plus freight of products and include a fee that covers their warehousing, financing, delivery, and sales costs—plus a profit. This system is legal because the fee is fixed and does not vary by volume as happens with the cost-plus-a-percentage-of-cost pricing system. Under reimbursable cost-plus-fixed-fee pricing, vendors are reimbursed for documented costs. A vital key to assuring that this type of pricing is mutually beneficial to school districts and vendors is that the vendors must be audited to make sure that reimbursements are for product costs. The procedure for determining these costs must be carefully defined in the contract. Issues such as promotion allowances, cash discounts, label allowances, rebates, and freight rates should all be addressed.

This approach to bid pricing allows schools to award long term contracts with vendors. The paper work costs to the school districts are decreased while at the same time the vendors' risks associated with firm pricing are not increased. Longer term contracts allow schools to provide their customers with a more consistent product for a longer period.



# IMPLEMENTING THE DGAs

Recent federal regulations have made the achievement of the *Dietary Guidelines for Americans* more than a professional goal; it is a government mandate. Carrying out the DGAs begins with an understanding of purchasing food according to menus structured to meet nutritional goals. Variety and choice in each meal component category are equally important. Incorporating whole grain products, fresh fruits, and vegetables into the menu is a cornerstone of DGA implementation, and the purchase of quality produce presents many challenges despite the purchasing system used in the school district. Ready-prepared items on the menu require even closer scrutiny through tight product specifications stipulating protein, fat, sodium, and caloric content.

## NFSMI INITIATIVES

In 1992, the NFSMI held a conference on the "Impact of Food Procurement on the Implementation of the *Dietary Guidelines for Americans* in Child Nutrition Programs." The purposes of the conference were to provide an overview of nutrition and cost issues related to implementing the DGAs and to identify issues related to food procurement in CNPs. A modified Delphi process was used to determine the participants' ideas in response to the conference. Ninety-four percent of the participants agreed that barriers to achievement of the DGAs were that:

- no benchmarks exist for nutritional quality of school meals in relation to the DGAs,
- eating habits of many children are inconsistent with the DGAs, and
- limited time is available for food service personnel to evaluate products, develop new recipes, and compare products.

The participants also rated the following training needs as *important to very important* in relation to implementing the DGAs: how to evaluate the nutritional content of a food product, writing food specifications, including developing model specifications, procedures for various methods of purchasing, and receiving procedures.

Since the conference, the NFSMI has engaged in research and training activities consistent with the recommendations from this conference. Conference proceedings were published to provide written documentation of the 14 papers presented. The NFSMI staff also wrote and produced a video with training materials on "Purchasing and the Dietary Guidelines." The newest release will be *First Choice: A Purchasing Systems Manual for School Food Service* which will be published this fall. *First Choice* is a 200-page manual written for school purchasers interested in redesigning their purchasing system to build mutually beneficial partnerships with food manufacturers and distributors. This manual examines such issues as applying critical path planning to the movement of food products. Just in Time (JIT) product movement strategies are applied to the

school environment. Innovative purchase systems and the use of third party market research as a basis for cost are examined in detail.

## FIRST CHOICE IS A 200-PAGE MANUAL WRITTEN FOR SCHOOL PURCHASERS INTERESTED IN REDESIGNING THEIR PURCHASING SYSTEM TO BUILD MUTUALLY BENEFICIAL PARTNERSHIPS WITH FOOD MANUFACTURERS AND DISTRIBUTORS

School purchasing can be approached from the standpoint of only placing food orders or from the perspective of designing a system that deals with all aspects of this essential school district function. *First Choice* contains fourteen chapters that examine the entire purchasing process. The NFSMI will provide this manual in combination with workshops to help school foodservice directors/supervisors make crucial decisions about purchasing in their district. *First Choice* workshops will be a learning exercise in controlling cost and improving the quality of food.

The NFSMI staff, through a cooperative agreement with the Nutrition and Technical Services Division of the Food and Consumer Services at USDA, also are developing a food and ingredient reference guide that will be a companion manual to *First Choice*. The technology associated with the production of food products has created many choices for school districts when developing specifications for food. *Choice Plus* provides information on the indicators of quality when developing such food descriptions. *Choice Plus* will provide school purchasers with the wording for sample specifications and quality descriptors on more than 125 foods. Line drawings and color photography are used where appropriate to illustrate choices that schools must make when developing their own food specifications. *Choice Plus* will be available in the fall of 1996. All of these resource materials are listed in the final section of this publication.

## FOR MORE INFORMATION

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### RESOURCES:

- Boudreaux, L.J., & Oldenquist, J.A. (1996). The effectiveness of the Mississippi State Department of Education purchasing program for Child Nutrition Programs. *School Food Service Research Review*, (accepted for publication).
- DeBurgh, R. K. (1994, November). C-o-o-p is not a four-letter word: Spelling out the benefits of co-op. *School Business Affairs*, 15-18.
- Heimstra, S.J., & Jaffe, W. (1996). Cost effectiveness of three purchasing systems. *School Food Service Research Review*, (accepted for publication).
- Gregoire, M.B., & Sneed, J. (1993). Barriers and needs related to procurement and implementation of the Dietary Guidelines. *School Food Service Research Review*, 17, 46-49.
- Gunn, M. (1993). Cooperation and commitment improves foodservice purchasing. *School Business Affairs*, 59, 14-17.
- Gunn, M. (1995). *First choice: A purchasing systems manual for school food service*, NFSMI-R19-95, University, MS: National Food Service Management Institute.
- Gunn, M. (1992). Professional in purchasing. *School Food Service Journal*, 46(9), 32-34.
- NFSMI. Purchasing and the Dietary Guidelines, TT092392, University, MS: author.
- Sneed, J., & Gregoire, M.B. (eds.) (1992). *Impact of food procurement on the implementation of the Dietary Guidelines for Americans in Child Nutrition Programs*, NFSMI-R5-1992, University, MS: National Food Service Management Institute.
- United States Department of Agriculture. (1996, in press). *Choice Plus: A food and ingredient reference guide*. Washington, D.C.: Superintendent of Documents.

Information about this and other topics may be obtained by contacting the

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