

VIII. FOOD SERVICE MANAGEMENT COMPANIES

This chapter provides a variety of descriptive information on SFAs' utilization of food service management companies (FSMCs) in the management and administration of the NSLP and SBP. Issues addressed in this chapter include the prevalence of FSMCs, the specific services or functions that are contracted to these organizations, determination of fees, and selection and monitoring of FSMCs.

BACKGROUND

Although FSMCs have been part of the school lunch service delivery system since the 1950s, it was not until 1969 that this relationship was formally acknowledged with a change in Federal regulations to permit FSMC operations in the NSLP. Federal regulations governing management company activities have been modified more than once since then. One of the most important changes occurred in 1987 when FNS responded to a provision of the School Lunch and Child Nutrition Amendments of 1986 by requiring that commercial firms operating in schools provide a full range of reimbursable meals to all eligible participants. As a result of this legislation, SFAs may not contract with a management company to provide a la carte food services unless the company also agrees to offer free, reduced-price and paid reimbursable lunches to all eligible children.

The use of FSMCs is on the rise in agencies that administer Child Nutrition Programs. An audit completed by the Office of Inspector General (OIG) indicated that 838 SFAs had FSMC contracts during SY 1987-88. While FNS is aware of the approximate number of SFAs that contract with FSMCs, the Agency has limited information on how SFAs actually utilize these for-profit companies, how SFAs select contractors and the methods used to monitor performance.

KEY RESEARCH ISSUES

The following research questions were addressed in order to provide a basic description of how FSMCs currently operate in school food service programs:

- What proportion of SFAs utilize food service management companies?
- What specific aspects of program management and administration are contracted to these companies? Which are retained by SFAs and which, if any, are shared?
- How are fees determined?
- Who awards FSMC contracts?
- How is FSMC performance monitored?
- Do SFAs perform an independent meal count to check the accuracy of counts claimed by FSMCs?

DATA AND VARIABLES

Data on FSMCs were collected in both the State Agency Survey and the Year One SFA Manager Telephone Survey. The State Agency Survey gathered information on the number of SFAs within each State that used a management company during SY 1988-89 and State requirements for such contracts above and beyond current Federal regulations. The data available from these surveys does not represent a census of the full 50 States, however, since six State agencies refused to complete the survey.

The SFA Manager Telephone Survey included questions regarding the use of FSMCs; the food service functions that are delegated to the FSMC, retained by the SFA or shared by both parties; determination of FSMC fees; person(s) responsible for contract award; and mechanisms used to monitor FSMC performance. Overall, these data were readily available. However, because of the small sample of SFAs that actually utilized FSMCs, the details of SFA-level operation issues can be considered as only suggestive evidence, rather than representative of FSMC operations nationwide. This is particularly true of questions relating to contract award and program monitoring, since these questions were asked in only a subsample of the SFAs that utilize FSMCs -- those where the respondent for the SFA Manager Survey was a non-FSMC employee.

PREVALENCE OF FSMCs

Results of the SFA Manager Telephone Survey indicate that overall, an estimated 7 percent of SFAs

employed a contract food service company during SY 1988-89 (Exhibit VIII.1). This suggests that the total number of SFAs with contracted food service was approximately 1,011 (7.1 percent of 14,259 SFAs), an increase of approximately 21 percent from the previously cited OIG data for SY 1987-88.^{1/} This result is in keeping with industry publications that indicate that FSMC involvement in school food service programs is steadily increasing. Indeed, information from two of the four largest contract management companies indicates that both have increased their involvement with schools substantially in the last two to four years.^{2/} Service America Corporation reports that it has increased the number of SFA contracts nearly 50 percent over the past four years. ARA Services claims to have increased its school contracts from 180 (in SY 1987-88) to over 200 in SY 1989-90. In Massachusetts, the number of SFAs under contract increased by 50 percent (from 16 to 22) between SY 1987-88 and SY 1989-90.^{3/}

Use of FSMCs is least common in private SFAs. Results indicate that fewer than 1 percent of private SFAs utilized contract food service in SY 1988-89. FSMCs are also less likely to be used by SFAs that participate in both the NSLP and SBP, small SFAs and high-poverty SFAs.

DISTRIBUTION OF FOOD SERVICE FUNCTIONS

When FSMCs are utilized, they are involved at some level in virtually all major functions involved in administering school nutrition programs (Exhibit ET-VIII.2). The specific functions most commonly contracted to FSMCs involve food purchasing. Ninety percent or more of SFAs that utilize FSMCs fully delegate the responsibility for selecting vendors, determining prices and specifications, and setting

^{1/}The State Agency Survey yielded an underestimate of the number of SFAs using FSMCs. Forty-three of the 44 State agencies that completed the survey provided this information, yielding an estimated total of 839 SFAs that use FSMCs. These data are reported in Exhibit ET-VIII.1.

^{2/}Source: Company literature and Restaurants and Institutions, July 24, 1989.

^{3/}Personal communication. D. Westfall; Abel, Daft and Early, 1990.

Exhibit VIII.1

SFAS' Use of Food Service Management Companies
(SY 1988-89)

	<u>Use of Food Service Management Co.</u>		Total SFAs (Weighted)
	Yes	No	
TOTAL SAMPLE	7%	93%	14,259
Type of SFA			
Public	9	91	11,275
Private ¹	0	100	2,984
Participation in SBP			
NSLP and SBP	3	97	3,849
NSLP only	9	91	10,410
SFA Size			
Small (1-999)	4	96	5,479
Medium (1000-4999)	10	90	4,890
Large (5000+)	7	93	1,743
Poverty Level of SFA			
High (60% or more F&R)	4	96	1,934
Low (0-59% F&R)	7	93	10,178

¹Fewer than one percent of private SFAs used an FSMC.

Data Source: Year One SFA Manager Telephone Survey.

delivery dates. Ninety percent have their contractor plan and develop menus.

Many activities associated with the commodity donation program are also contracted. In more than 80 percent of SFAs that use FSMCs, the management companies have major responsibility for dealing with the commodity program. Specific functions include determining quantities of commodities to be ordered, arranging or providing for delivery, and arranging for processing. In 74 percent of SFAs with FSMCs, contractors are also solely responsible for the storage and transportation of commodities.

Management companies are also involved in food preparation and service. In 80 percent of SFAs with contract management, the contractor is solely responsible for providing a la carte service. Moreover, FSMCs are solely responsible for regular breakfast and lunch service in about 70 percent of the SFAs that utilize their services.

In the remaining 30 percent of SFAs, responsibility for some or all of the functions related to food preparation and service is maintained by the school district. Approximately one-quarter of SFAs retain sole responsibility for actually serving lunch, and for related tasks such as issuing lunch tickets and/or collecting money. After-meal cafeteria clean-up is most commonly shared by FSMCs and SFAs; FSMCs are solely responsible for this task in only 15 percent of SFAs.

Finally, while over 60 percent of SFAs that contract with FSMCs delegate accounting and record-keeping functions, most SFAs do remain involved in the preparation of reimbursement claims for the NSLP and SBP. Forty-three percent of SFAs share responsibility for claims preparation and 17 percent maintain full responsibility for this task.

DETERMINATION OF FEES

FSMC contracts fall into two categories: (1) administrative fee agreements in which the SFA agrees to pay a flat fee for management of the system and (2) per-meal cost reimbursable arrangements.

The majority of SFAs that used FSMCs in SY 1988-89 (63 percent) paid a flat administrative fee (Exhibit VIII.2). Thirty-five percent of SFAs reported use of a per-meal rate to determine or adjust the fee

Exhibit VIII.2

Basis for Fee Paid to Food Service
Management Companies
(SY 1988-89)

What is the basis for the fee paid to the food service management company?	Percent of SFAs
Flat administrative fee	63%
Per-meal fee	18
Both administrative and per-meal fees	17
Percent of cafeteria sales	1
Other	1
Total SFAs (Weighted)	1,011

N and percentages reflect SFAs that utilized a food service management company in SY 1988-89.

Data Source: Year One SFA Manager Telephone Survey.

paid to FSMCs. Most (77 percent) of the SFAs that use per-meal rates in determining fees do consider a la carte and other cafeteria sales when computing fees (Exhibit VIII.3). The specific method most frequently used to translate a la carte revenues into meal equivalents is to divide total a la carte sales by the cost of a standard lunch (Exhibit VIII.3).

State agencies were asked to identify specific State-initiated regulations that govern SFA contracts with FSMCs. Seventy-eight percent of the States where at least one SFA used an FSMC rely strictly on the existing Federal regulations in this area (Exhibit VIII.4). Twelve percent of these States reported additional requirements related to State approval of the RFP along with the final bid and contract. One State specifically stipulated the use of a standard a la carte cost conversion (using an SFA meal cost average or a State average), and one State reported a more stringent time restriction on contract renewals (2 years vs. 4 years).

CONTRACT AWARD AND MONITORING OF PERFORMANCE

Answers to survey questions related to contract award and monitoring were obtained for less than half of the SFAs that used management companies. This amount of missing data was unavoidable because the individual interviewed for the remaining SFAs was an employee of the FSMC, and therefore an inappropriate respondent for this series of questions. In view of the limited data available, the findings discussed below should be cautiously interpreted.

The available data, summarized in Exhibit VIII.5, indicate that decisions about FSMC contracts are almost always made by the School Board (93 percent). Most SFAs that employ FSMCs attempt to monitor contractor performance; only 2 percent of responding SFAs indicated that no monitoring takes place. Monitoring is typically managed by non-food service personnel such as school district business managers (47 percent of SFAs), school superintendents (32 percent), and school principals (25 percent). Thirty-nine percent of responding SFAs indicated that FSMC performance is monitored on a monthly basis, and 24 percent reported daily monitoring. Fifteen percent of SFAs indicated that monitoring is limited to an annual review.

Exhibit VIII.3

Consideration of A La Carte Sales in
Determination of Fees Paid to
Food Service Management Companies
(SY 1988-89)

	Percent of SFAs	
Are a la carte and snack items "translated" into meal equivalents?		
Yes	77%	
No	23	
Total SFAs (Weighted) ¹		347
How are meal equivalents computed for a la carte items?		
A la carte revenues/meal cost ²	76%	
Predetermined amount	17	
Other	7	
Total SFAs (Weighted) ³		260

¹N and percentages reflect SFAs that used a food service management company in SY 1988-89 and determined or adjusted fees on a per-meal basis.

²Total a la carte sales divided by the cost of a standard lunch.

³N and percentages reflect SFAs that used a food service management company, determined or adjusted fees on a per-meal basis, and translated revenue from snacks and a la carte sales into meal equivalents.

Data Source: Year One SFA Manager Telephone Survey.

Among SFAs that responded to this series of questions, the most frequently reported factor considered in monitoring contractor's performance was their ability to provide acceptable, high-quality meals. Other factors considered in monitoring FSMC performance are summarized in Exhibit VIII.6.

Finally, survey respondents in districts that delegate responsibility for preparation of meal reimbursement claims were asked whether the school district performs an independent meal count to verify the accuracy of counts submitted by the FSMC. Responses are summarized in Exhibit VIII.7, but must be interpreted cautiously due to the small sample size and significant amounts of missing data. As the Exhibit illustrates, it appears that in SFAs where the preparation of meal reimbursement claims is handled solely by the FSMC, independent meal counts by SFA personnel are not commonly performed.

Exhibit VIII.6

Factors Considered in Monitoring
Food Service Management Companies
(SY 1988-89)

Factor	Percent of SFAs
Ability to provide acceptable/high quality meals	65%
Level of student participation	37
Ability to keep prices low	37
Efficient administration	33
Careful recordkeeping	28
Total SFAs (Weighted)	436

N and percentages reflect SFAs that utilized a food service management company in SY 1988-89, monitored their performance, and had a non-FSMC employee respond to the SFA Manager Telephone Survey.

Column totals more than 100 percent because multiple factors could be reported by survey respondents.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit VIII.4

State Requirements for Food Service
Management Company Contracts
(SY 1988-89)

State Requirements	Number/Percent of States	
	(n)	(%)
Nothing Beyond Federal Regulations	25	78%
Meet State Procurement Requirements ¹	4	12
A La Carte Cost Conversion ²	1	3
Contract Renewal Stipulations ³	1	3
Missing	1	3

¹Specific responses included State-required review of RFP, submission of list of vendors responding, and submission of final bid and contract for State approval.

²District cost per meal or State average cost used to convert a la carte sales to meal equivalents in determining fees.

³Contract renewal after initial year limited to 2 year maximum.

Based on n=32 (Number of States where at least one SFA used a Food Service Management Company in SY 1988-89).

Data Source: State Agency Survey.

Exhibit VIII.5

Award and Monitoring of Food Service
Management Company Contracts
(SY 1988-89)

	Percent of SFAs ¹
<hr/>	
Who awards the contract to the food service management company?	
School board	93%
City purchasing agent	7
Who monitors the performance of the food service management company? ²	
Business Manager	47%
Superintendent	32
School principal	25
Someone else	22
No monitoring done	2
How often does monitoring occur?	
Monthly	39%
Daily	24
Annually	15
Weekly	7
Quarterly	4
Other	9
No monitoring done	2
Total SFAs (Weighted)	467

¹N and percentages reflect SFAs that utilized a food service management company in SY 1988-89 and had a non-FSMC employee respond to the SFA Manager Telephone Survey.

²Column totals more than 100 percent because more than one individual can be involved in monitoring performance.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit VIII.7

Use of Independent SFA Meal Counts to
Check Accuracy of Reimbursement Claims
Filed by Food Service Management Companies
(SY 1988-89)

Use of Independent Counts	Percent of SFAs
Yes	2%
No	59
Don't Know/Missing	39
Total SFAs (Weighted)	196

N and percentages reflect SFAs that utilized a food service management company in SY 1988-89, delegated responsibility for preparation of meal reimbursement claims to the FSMC, monitored their performance, and had a non-FSMC employee respond to the SFA Telephone Survey.

Data Source: Year One SFA Manager Telephone Survey.

IX. FOOD SERVICE PROGRAM CHARACTERISTICS

This chapter provides descriptive statistics on a variety of issues related to food service operations in participating SFAs. Topics addressed include food purchasing procedures, kitchen facilities and meal service systems, use of SFA food service facilities for programs other than the NSLP and SBP, availability of alternative food services (e.g. vending, a la carte service), use of the Offer vs. Serve (OVS) option at the elementary school level, and nutritional analysis of menus.

BACKGROUND

FNS requires information on a variety of specific issues related to how the NSLP and SBP are implemented at the local level. A more thorough understanding of how food service programs are actually administered will allow FNS to better respond to Congressional inquiries, facilitate the preparation of regulations, and provide guidance for the Agency's budgetary responsibilities.

KEY RESEARCH ISSUES

The following research questions were posed to meet FNS' information needs:

- Do SFAs use a competitive bid process to select food vendors?
- Do SFAs participate in purchasing cooperatives? If so, which food items are most commonly purchased through cooperatives?
- How do SFAs and schools purchase food--which foods are ordered at the district level and which are ordered by individual schools?
- What types of kitchen facilities and meal service systems do SFAs utilize?
- Are SFA food service facilities used for programs other than the NSLP and SBP? If so, does the provision of meals to other programs have any impact on meal service in the NSLP and SBP?

- What types of non-USDA meal alternatives (e.g., vending machines, a la carte, open-campus privileges) are available in SFAs?
- Do SFAs typically offer students a choice of various entrees in the NSLP?
- What proportion of SFAs utilized the OVS option at the elementary school level during SY 1988-89?
- Do SFAs conduct a formal nutritional analysis of their planned menus? Are SFAs interested in receiving information about computer programs that can facilitate this process?

DATA AND VARIABLES

Most of data to address the identified research questions were obtained through the Year One SFA Manager Telephone Survey. Non-response to most of these survey questions was negligible. Data on vended meals were gathered in the State Agency Survey.

FOOD PURCHASING PROCEDURES

This section describes food purchasing procedures used by SFAs. Use of competitive bids and purchasing cooperatives are discussed, including a description of the foods most commonly purchased through cooperatives. The origin of food orders within SFAs is also described (i.e., which foods are purchased or ordered at the SFA level, and which are ordered by individual schools).

Use of Competitive Bids

Overall, 37 percent of SFAs utilize a competitive bid process in selecting all or most of their food vendors (Exhibit IX.1). Thirty-two percent use competitive bids only for their largest orders, most often bread, milk and ice cream. Twenty-five percent of SFAs never use competitive bids.

As Exhibit IX.1 illustrates, there are substantial differences among subgroups of SFAs in the use of competitive bids. Private SFAs are much less likely to use a competitive bid process than public SFAs; 65 percent of private SFAs never do so. SFAs that do not participate in the SBP, small SFAs, and low-poverty SFAs are also less likely to use competitive bids in selecting food vendors than other types of SFAs.

Exhibit IX.1

SFAs' Use of Competitive Bid Process In Selecting Food Vendors
(SY 1988-89)

	Use of Competitive Bid Process				Total SFAs (Weighted)
	Yes, For All or Most Vendors	Yes, Large Orders Only	Not at All	Other	
TOTAL SAMPLE	37%	32%	25%	6%	14,259
Type of SFA					
Public	42*	35	16	7	11,275
Private	12	19	65	4	2,984
Participation in SBP					
NSLP and SBP	52*	30	13	5	3,849
NSLP only	31	33	30	6	10,410
SFA Size					
Small (1-999)	24*	32	41	3	5,479
Medium (1000-4999)	51*	32	9	8	4,890
Large (5000+)	61	34	1	4	1,743
SFA Poverty Level					
High (60% or more F&R)	54*	27	14	5	1,934
Low (0-59% F&R)	38	34	24	5	10,178

Data Source: Year One SFA Manager Telephone Survey

Purchasing
Cooperatives

Participation in purchasing cooperatives among SFAs administering Child Nutrition Programs is relatively uncommon. Only 23 percent of SFAs participated in purchasing cooperatives in SY 1988-89 (Exhibit IX.2). Purchasing cooperatives are least common among private SFAs and high-poverty SFAs.

Among the 23 percent of SFAs that do participate in cooperatives, the foods most frequently purchased include canned goods (80 percent of participating SFAs), staple items (73 percent of participating SFAs) and frozen foods (71 percent). Bread, fresh meats and dairy products are also purchased cooperatively by approximately half of the SFAs that participate in group purchasing programs. These data are summarized in Exhibit ET-IX.1.

Origin of
Food Orders

SFA Managers were asked to identify foods that are usually ordered at the district level and those that are typically ordered by individual schools. Data are summarized in Exhibit ET-IX.2, and demonstrate that the type of food and the size of an SFA influence where food orders originate. In large SFAs, orders for all foods except dairy products are most often placed at the district level. This is particularly true for food items that are typically purchased in large volume and/or ordered on a weekly or monthly basis (e.g., canned goods, frozen foods, fresh meats, and staple items). In all SFAs, food items that are generally ordered on a daily basis or several times per week (e.g., dairy products, bread, fresh produce and ice cream), are more frequently ordered by individual schools.

KITCHEN FACILITIES AND MEAL SERVICE SYSTEMS

SFA managers were asked to identify the types of kitchen facilities used in serving meals in their school districts. Managers were also asked to describe the types of meal service utilized, i.e., whether foods are prepared in bulk and individually served to participating students, or meals are totally or partially prepackaged.

Kitchen Facilities. Exhibit IX.3 summarizes the types of kitchen facilities used in SFAs. As the exhibit illustrates, just over half (55 percent) of SFAs operate exclusively with on-site kitchens. Twenty-two percent of SFAs utilize one or more base kitchens or a central kitchen to prepare meals for

Exhibit IX.2

SFA Participation in Purchasing Cooperatives
(SY 1988-89)

Participation in Purchasing Cooperatives

	Yes	No	Total SFAs (Weighted)
TOTAL SAMPLE	23%	77%	14,259
Type of SFA			
Public	26	74	11,275
Private	9	91	2,984
Participation in SBP			
NSLP and SBP	19	81	3,849
NSLP only	24	76	10,410
SFA Size			
Small (1-999)	16	84	5,479
Medium (1000-4999)	26	74	4,890
Large (5000+)	21	79	1,743
SFA Poverty Level			
High (60% or more F&R)	7	93	1,934
Low (0-59% F&R)	24	76	10,178

Data Source: Year One SFA Manager Telephone Survey

Exhibit IX.3

Types of Kitchen Facilities Used in SFAs
(SY 1988-89)

	Kitchen Facilities ¹			Total SFAs (Weighted)
	On-Site Kitchens Only	Base or Central Kitchens with Satellites Only	Combination ²	
Total Sample	55%	22%	23%	14,259
Type of SFA				
Public	50	22	28	11,275
Private	77	21	2	2,984
Participation in SBP				
NSLP and SBP	50	18	32	3,849
NSLP only	57	23	19	10,410
SFA Size				
Small (1-999)	76	19	6	5,479
Medium (1,000-4,999)	40	28	32	4,890
Large (5,000+)	25	14	61	1,743
SFA Poverty Level				
High (60% or more F&R)	57	13	30	1,934
Low (0-59% F&R)	53	23	24	10,178

¹Definitions: On-Site Kitchens: All food is prepared and served on-site; Base Kitchens with Satellites: Some food is prepared and served on-site, and some is prepared and shipped out to satellite locations for actual service to students; Central Kitchen with Satellites: All food is prepared in a central location and shipped out to satellites for service to students. No on-site preparation and service.

²Breakdown for total sample: On-site plus base and satellites = 20 percent; On-site plus both base and central = 2 percent; On-site plus central = 1 percent.

Note: Rows may not sum to 100 percent due to rounding.

Data Source: Year One SFA Manager Telephone Survey.

satellite/receiving kitchens.^{1/} Combinations of two or more types of kitchen facilities are utilized in approximately 23 percent of SFAs. On-site kitchens plus base kitchen(s) with satellites is the most common combination.

SFA size influences the type of kitchen facilities utilized. Approximately three out of four small SFAs use on-site kitchens exclusively, while only one in four large SFAs do so. Large SFAs are much more likely to use a combination of kitchen systems (61 percent).

Meal Service Systems. Most meals served in the NSLP and SBP are prepared and served in bulk. That is, foods are prepared in large quantities and served to individual children as they pass through a cafeteria line. Sixty-four percent of SFAs rely exclusively on bulk meal service in preparing and serving meals (Exhibit IX.4). Another 11 percent of SFAs use bulk meal service in combination with some type of pre-packaged meal service. Only 10 percent of SFAs use pre-packaged meals exclusively.

Data on the number of SFAs in each State using vended meals were collected in the State Agency Survey. While these data do not represent a full census of all 50 States, the available evidence corroborates that found in the SFA Manager Telephone Survey and indicates that use of vended (pre-packaged) meals in Child Nutrition Programs is relatively rare. In 50 percent of the States surveyed, no vended meals are used (Exhibit ET-IX.3). In 28 percent of States, the number of SFAs using vended meals is 7 or less. Only 4 States (approximately 8 percent of those surveyed) reported more than 7 SFAs using vended meals, with a range of 39-224 SFAs.

SFAs that do use vended meals may obtain them from a number of different sources. In 94 percent of the States where one or more SFA uses vended meals, meals are obtained from another SFA (Exhibit ET-IX.4). Commercial vendors are utilized in 81 percent of these States, and hospitals provide vended meals in 31 percent of these States.

^{1/}Survey data indicate that only about one percent of SFAs rely exclusively on a central kitchen (defined as a kitchen where all prepared meals are shipped to satellite kitchens; none are served and consumed on-site) with satellites.

Exhibit IX.4

Meal Service Systems Used in SFAs
(SY 1988-89)

	Meal Service System				Total SFAs (Weighted)
	Bulk Meal Service Only	Bulk Plus Pre-packaged Meals	Pre-packaged Meals Only	Missing	
TOTAL SAMPLE	64%	11%	10%	15%	14,259
Type of SFA					
Public	60	14	11	15	11,275
Private	78	1	4	17	2,984
Participation in SBP					
NSLP and SBP	62	17	11	10	3,849
NSLP only	65	9	9	17	10,410
SFA Size					
Small (1-999)	68	6	8	19	5,479
Medium (1000-4999)	67	14	8	11	4,890
Large (5000+)	50	22	14	14	1,743
SFA Poverty Level					
High (60% or more F&R)	57	15	10	18	1,934
Low (0-59% F&R)	66	11	9	15	10,178

Data Source: Year One SFA Manager Telephone Survey

USE OF SFA FOOD SERVICE FACILITIES FOR OTHER PROGRAMS

SFA managers were asked whether district food service facilities were used for programs other than the district's own NSLP and SBP. Managers who responded affirmatively to this question were then asked whether they provided food service for a specific set of alternative programs, including day care centers participating in the Child and Adult Care Food Program (CACFP), day care centers not participating in CACFP, the Summer Food Service Program, elderly congregate feeding programs and the NSLP and/or SBP in other school districts.

Responses to these survey items are summarized in Exhibits ET-IX.5 and ET-IX.6. As the exhibits demonstrate, 28 percent of SFAs utilize their food service facilities for alternative programs. Most of these SFAs use their facilities to service programs other than those listed above, however. Only 15 percent of the SFAs that serve other programs prepare meals for elderly feeding sites; 12 percent provide NSLP and/or SBP meals for other SFAs; 11 percent service day care centers that participate in the CACFP; and 10 percent provide meals for the Summer Food Service Program. Fifty-one percent of the SFAs that use their food service facilities for non-NSLP/SBP programs cited a wide variety of other programs including Head Start centers, alternative and adult education programs and various community programs and activities. No specific program was cited by more than 10 percent of SFAs.

Managers in SFAs that use their food service facilities for alternative programs unanimously reported that this activity has had no deleterious impacts on their traditional NSLP or SBP meal service. Nine percent of these SFA managers indicated that provision of food service to other programs actually had positive impacts on their programs. Specific positive effects include more efficient use of facilities, reduced meal costs, enhanced public relations, and increased cafeteria profits (Exhibit ET-IX.7).

AVAILABILITY OF ALTERNATIVE FOOD SERVICES

To obtain information on the alternatives available to potential NSLP and SBP participants, SFA managers were asked about the availability of a la carte foods, vending machines and snack bars in the

elementary and middle/secondary schools in their districts. Managers were also asked whether students were allowed off-campus at meal times during the current (SY 1988-89) school year. Responses to this series of questions are discussed below.

A La Carte, Vending and Snack Bars

As Exhibit IX.5 shows, children in middle/secondary schools have considerably more alternatives available to them than do children in elementary schools. Only 18 percent of SFAs that participate in the SBP offer a la carte breakfast items in elementary schools; in contrast, 41 percent of SFAs have a la carte breakfast items available in middle/secondary schools. A la carte lunch items are also available more frequently in middle/secondary schools than in elementary schools (78 percent vs. 32 percent). A la carte service is especially prevalent in middle/secondary schools in large SFAs. More than nine out of ten large SFAs offer a la carte lunch items at the middle/secondary school level. Among large SFAs that participate in the SBP, six in ten offer a la carte breakfast items in their middle/secondary schools.

Vending machines and snack bars are also more prevalent in middle/secondary schools than elementary schools. Only 5-6 percent of SFAs have either of these options available in elementary schools. In contrast, 48 percent of SFAs have vending machines available in at least some middle/secondary schools, and 35 percent of SFAs have snack bars available.

Exhibits ET-IX.8 and ET-IX.9 summarize the availability of specific non-USDA food items both inside and outside the cafeteria.

Off-Campus Privileges at Meal Time

Off-campus meal privileges, which can present a variety of meal-time alternatives, are not widespread in either elementary or middle/secondary schools (Exhibits ET-IX.10 and ET-IX.11). Only 20 percent of SFAs have elementary schools that allow students to go off campus at meal times; 30 percent have off-campus meal privileges at the middle/secondary school level. The prevalence of off-campus meal privileges in elementary schools varies little across SFA subgroups. At the middle/secondary school level, however, private SFAs are much less likely to allow students off campus than public SFAs (9 percent vs 30 percent).

Exhibit IX.5

Proportion of SFAs that Offer Alternative Food Services
In Elementary and Middle/Secondary Schools
by SFA Size
(SY 1988-89)

Alternative Food Service	Elementary Schools ¹				Middle/Secondary Schools ¹			
	Small	Medium	Large	All SFAs	Small	Medium	Large	All SFAs
A la carte breakfast items ²	13%	25%	13%	18%	3%	44%	61%	41%
A la carte lunch items	26	37	38	32	55	85	93	78
Vending machines	4	7	5	5	35	51	59	48
Snack bars	7	7	2	6	22	35	56	35
Total SFAs (Weighted)	4,921	4,756	1,700	11,377	2,639	4,804	1,715	9,162

¹Ns and percentages for elementary schools reflect SFAs that had at least one elementary school and that completed the SFA mail survey where data on student enrollment (size) were collected. Ns and percentages for middle/secondary schools reflect SFAs that completed the SFA mail survey and had at least one middle/secondary school.

²Percentages reflect SFAs that offer the breakfast program and have at least one elementary school (Total SFAs = 3,843 for elementary schools; 3,313 for middle/secondary schools).

Data Source: Year One SFA Manager Telephone Survey and SFA Manager Mail Survey.

OFFER-VERSUS-SERVE IN ELEMENTARY SCHOOLS AND CHOICE IN NSLP ENTREES

SFA managers were asked about two specific NSLP operations issues that were of interest to FNS: 1) the availability of the offer-versus-serve (OVS) option in elementary schools ¹; and 2) the availability of a choice of entrees in the NSLP meals offered to participating students. These data are discussed in the following sections.

Offer-Versus-Serve in Elementary Schools

Approximately 64 percent of SFAs used the OVS option in elementary schools during SY 1988-89 (Exhibit IX.6). Fewer private SFAs utilized the OVS option than public SFAs (55 percent vs. 67 percent), and small SFAs used OVS less often than large SFAs (59 percent vs. 72 percent).

Choice in NSLP Entrees

As Exhibits ET-IX.12 and ET-IX.13 illustrate, students in middle/secondary schools have more options when selecting NSLP meals than students in elementary schools. Forty percent of SFAs offer multiple NSLP entrees to elementary school students, compared to 75 percent for middle/secondary school students. In both types of schools, small SFAs are less likely to offer choice in entrees than other types of SFAs. At the elementary school level, high-poverty SFAs are also less likely to offer entree choices than other types of SFAs. In middle/secondary schools, where the prevalence of choice is much higher overall, large SFAs are most likely to offer multiple entrees (95 percent) and private SFAs are least likely to do so (44 percent).

NUTRITIONAL ANALYSIS OF MENUS

More than two-thirds of all SFAs (69 percent) analyze the nutrient content of their menus. The prevalence of this practice varies little across SFA subgroups (Exhibit IX.7). Very few (9 percent) of the SFAs that evaluate the nutrient content of their menus utilize a computer-based nutrient analysis

¹The offer-versus-serve (OVS) option stipulates that schools must offer meals planned in accordance with program meal pattern guidelines, but that students may decline up to two of the five required food items. This option was mandated for high schools in 1975, and extended to elementary schools, at the discretion of the local district, in 1981.

Exhibit IX.6

Implementation of the Offer vs. Serve Option in Elementary Schools
(SY 1988-89)

<u>Offer vs. Serve Option in Elementary Schools¹</u>			
	Yes	No	Total Weighted N
TOTAL SAMPLE	64%	36%	13,497
Type of SFA			
Public	67*	33	10,869
Private	55	45	2,628
Participation in SBP			
NSLP and SBP	66	34	3,789
NSLP only	64	36	9,709
SFA Size			
Small (1-999)	59*	41	4,929
Medium (1000-4999)	70	30	4,756
Large (5000+)‡	72	28	1,700
SFA Poverty Level			
High (60% or more F&R)	71	29	1,862
Low (0-59% F&R)	65	35	9,514

¹Ns and percentages reflect SFAs that have at least one elementary school.

*Chi-square test of independence is statistically significant at the .01 level.

‡Reference group used in comparisons: Large SFAs vs. Small SFAs; Large SFAs vs. Medium SFAs.

Data Source: Year One SFA Manager Telephone Survey

Exhibit IX.7

SFAs' Use of Nutritional Analysis to Plan or Evaluate Menus
(SY 1988-89)

	<u>Nutritional Analysis of Menus</u>		Total
	Yes	No	Weighted N
TOTAL SAMPLE	69%	31%	14,259
Type of SFA			
Public	71	29	11,275
Private	61	39	2,984
Participation in SBP			
NSLP and SBP	70	30	3,849
NSLP only	68	32	10,410
SFA Size			
Small (1-999)	68	32	5,749
Medium (1000-4999)	71	29	4,890
Large (5000+)	61	39	1,743
SFA Poverty Level			
High (60% or more F&R)	62	38	1,934
Low (0-59% F&R)	70	30	10,178

Data Source: Year One SFA Manager Telephone Survey

program (Exhibit ET-IX.14). Computerized analysis is particularly uncommon among private SFAs; only 2 percent of these SFAs use a computerized approach to nutrient analysis. Large SFAs are more likely to use computers than other types of SFAs, but even in this group, only about one-fifth of SFAs reported use of computerized nutritional analysis.

Most of the SFAs that reported use of computer programs were not able to adequately identify the specific software package that was used. The program most frequently mentioned was Food Processor II; 42 percent of the SFAs that used computerized nutritional analysis cited this software package.

All SFA managers were asked about their interest in receiving information on computer programs that can facilitate nutritional analysis. Fifty-six percent of all managers indicated that they would be interested in receiving such information (Exhibit IX.8). Over sixty percent of public SFA managers are interested in further information on computer programs for nutrient analysis; roughly the same proportion of private SFA managers, on the other hand, are not interested.

Exhibit IX.8

SFA Managers' Interest in Computer Programs for Nutritional Analysis
(SY 1988-89)

	Interest in Computer Programs for Nutritional Analysis		Total Weighted N
	Yes	No	
TOTAL SAMPLE	56%	44%	14,259
Type of SFA			
Public	61	39	11,275
Private	37	63	2,984
Participation in SBP			
NSLP and SBP	67	33	3,847
NSLP only	52	48	10,410
SFA Size			
Small (1-999)	55	45	5,479
Medium (1000-4999)	60	40	4,890
Large (5000+)	71	29	1,743
SFA Poverty Level			
High (60% or more F&R)	65	35	1,934
Low (0-59% F&R)	58	42	10,178

Data Source: Year One SFA Manager Telephone Survey

X. TRAINING AND TECHNICAL ASSISTANCE

This chapter describes training and technical assistance in Child Nutrition Programs at two levels. First, the current training and technical assistance programs available through State Agencies in SY 1988-89 are characterized in terms of topics covered, training mechanisms utilized and target audiences. Reported changes in the level of training and technical assistance over the past several years are described, along with factors that influenced these changes.

Next, the type and amount of training and technical assistance received by SFA-level personnel during SY 1988-89 are described. Specific training and technical assistance needs, as reported by SFA managers, are also summarized.

BACKGROUND

Training and technical assistance programs are utilized in the Child Nutrition Programs to ensure that programs operate efficiently, that they comply with Federal regulations and policies, and that nutritious, high-quality meals are served to school children. FNS develops technical assistance materials and, through its Regional Offices (FNSROs), provides technical assistance to State Agencies. State Agencies are, in turn, charged with providing technical and managerial assistance to local SFAs. FNS is interested in knowing more about the training and technical assistance currently being provided to SFAs as well as the areas in which SFAs perceive technical assistance needs. This information will be useful to FNS program operations personnel in determining how to deploy resources in this area.

KEY RESEARCH ISSUES

The following research questions were framed to provide a comprehensive description of current training and technical assistance in the Child Nutrition Programs:

Training and technical assistance provided by State Agencies

- What specific topic areas do State Agencies

include in training and technical assistance programs?

- Is training and technical assistance provided routinely or only in response to SFA requests? What mechanisms do State Agencies employ in providing technical assistance (e.g., written materials, workshops or courses, discussions during program reviews, etc.)
- Which SFA personnel do State Agencies reach in their training and technical assistance programs?
- Has the level of training provided by State Agencies changed over the last three years (SY 1985-86 to SY 1988-89)? If so, why?

Training and technical assistance received by SFAs

- What proportion of SFAs received training or technical assistance in SY 1988-89? How much training did SFAs receive, and in what topic areas?
- Which SFA personnel received training?
- Do SFAs receive training and technical assistance from sources other than the State Agency? If so, who else provides assistance to SFAs?
- What training and technical assistance needs do SFAs report? Do SFAs believe that State Agencies can meet these needs?

DATA AND VARIABLES

Directors of State Child Nutrition Programs and State Distributing Agencies were interviewed to collect State-level data. Although a full census of States was not achieved (six States refused to complete the survey), Child Nutrition Directors in 44 States were interviewed. Complete data on current technical assistance activities in these States were collected including topics covered, pattern of provision (i.e., is assistance provided on a routine basis or only in response to SFA request), training mechanisms utilized (i.e., workshops, written materials), whether the level of training or technical assistance has changed over the past three years, and reasons for any reported changes.

The Year One SFA Manager Telephone Survey included a comparable series of questions focused on training and technical assistance that was actually received by SFA personnel during SY 1988-89, as well as perceived training and technical assistance needs. Non-response rates to these questions were negligible.

TRAINING AND TECHNICAL ASSISTANCE PROVIDED BY STATE AGENCIES

Topics Included and Pattern of Provision

In SY 1988-89, State agencies provided training and technical assistance on a wide variety of topics (Exhibit X.1). All State Agencies provided training or technical assistance related to menu planning, recordkeeping, and program regulations and procedures. Technical assistance in these areas is provided routinely in most States; 43-54 percent of States also provide this type of technical assistance in response to specific SFA requests. Four percent of State Agencies provide technical assistance related to recordkeeping only on request and 18 percent provide assistance with menu planning only when requested.

Most States include food purchasing (91 percent of all States), food sanitation and safety (96 percent), food preparation (93 percent) and merchandising (98 percent) in their current training and technical assistance programs. More than three-quarters of States provide training on food sanitation and safety and merchandising on a routine basis; slightly more than one-third of State Agencies also provide such training on special request. Training related to food purchasing and food preparation appears to be handled differently; 30-36 percent of States provide training in these areas only when SFAs specifically request it.

Eighty-six percent of States surveyed provide training and technical assistance to facilitate SFA's use of commodities. More than two-thirds of States provide this assistance on a routine basis. Sixteen percent of States, however, provide technical assistance regarding commodity use only when SFAs request it, and 14 percent of States indicated that such assistance was not available to SFAs in SY 1988-89.

Technical assistance related to contracting procedures is not as consistently available as other types of assistance. While 50 percent of States do provide routine training and technical assistance in

Exhibit X.1

Topics Included in Training and Technical Assistance Provided by State Agencies (SY 1988-89)

Topic	How Training/Technical Assistance is Provided			
	Provided Routinely	Provided Routinely and on Request	Provided Only on Request	Not Provided
Food Purchasing	18%	36%	36%	9%
Food Sanitation and Safety	39	41	16	4
Menu Planning	39	43	18	0
Food Preparation	39	25	30	7
Contract Procedures	25	25	20	30
Recordkeeping	50	46	4	0
Merchandising	43	34	20	2
Regulations and Procedures	46	54	0	0
Use of Commodities	36	34	16	14

Based on n=44 (Number of states that completed the State Agency Survey).

Rows may not total to 100 percent due to rounding.

Data Source: State Agency Survey.

this area, 30 percent provide no technical assistance in this area (Exhibit X.1).

Training Mechanisms Utilized

State Agencies utilize several different mechanisms in delivering training and technical assistance to SFAs (Exhibit X.2). Ninety percent or more of States have special workshops or courses available for each of the topic areas investigated, with the exception of contract procedures. States also provide written materials and discuss technical assistance issues during on-site program reviews.

Recipients of Training and Technical Assistance

Technical assistance provided by State Agencies reaches a broad range of program personnel (Exhibit ET-X.1). SFA managers are the most common recipients of training. Cafeteria workers, SFA administrative staff and school administrators are also commonly included.

Changes Since SY 1985-86

State Child Nutrition directors were asked whether the level of technical assistance and training they provided in SY 1988-89 was any different from what they had provided in SY 1985-86; their answers are summarized in Exhibits X.3 and X.4. Slightly more than half of the States surveyed (52 percent) reported an increase in training and technical assistance activities over the last three years. Thirty-six percent of States experienced no change, and 9 percent reported that the level of training and technical assistance had decreased since SY 1985-86.

Among States that reported an increase in training activities over the past three years, 48 percent attributed the increase to the availability of additional funds and/or staff. Forty-eight percent cited changes in Federal regulations as the reason for increased provision of technical assistance. (A number of respondents specifically mentioned the recent FNS Accuclaim initiative to improve meal claiming procedures as a reason for increased training and technical assistance.) Approximately one-third of States indicated that increases in technical assistance were specifically targeted to meet identified SFA needs, including cost containment in food production, need for professionalization of child nutrition staff workers, and modifying menus to meet the U.S. Dietary Guidelines. Twenty-two percent of States increased training in response to the perceived need for more State involvement in Child Nutrition Program operations at the SFA level.

Exhibit X.2

Mechanisms Used by State Agencies
in Providing Training and Technical
Assistance to SFAs
(SY 1988-89)

Topic	States Providing (n)	Mechanisms Used			
		Special Workshops/ Courses	Provide Written Materials	Discuss During Program Reviews	Other
Food Purchasing	40	95%	70%	72%	5%
Food Sanitation and Safety	42	98	81	71	7
Menu Planning	44	100	82	77	0
Food Preparation	41	90	66	54	9
Contract Procedures	31	71	81	39	13
Recordkeeping	44	100	82	84	16
Merchandising	43	91	84	65	0
Regulations and Procedures	44	100	96	80	2
Use of Commodities	38	92	68	58	9

Ns and percentages for each topic reflect States that provided some form of training or technical assistance in that area. Rows do not total to 100 percent because States can use more than one format in providing training and technical assistance.

Data Source: State Agency Survey.

Exhibit X.3

Change in Level of Training and Technical Assistance Provided by State Agencies
(SY 1985-86 to SY 1988-89)

Has the level of training you provide changed over the past three years?	Percent of States
Yes, Increased	52%
Yes, Decreased	9
No, Remained the Same	36
Don't Know	2
Total States	44

Based on N = 44 (Number of States that completed the State Agency survey).

Data Source: State Agency Survey.

Exhibit X.4

Reasons for Change in Level of Training and Technical Assistance Provided by State Agencies
(SY 1985-86 to SY 1988-89)

Change/Reasons	Percent of States
Increased^a	
More money or staff available	48%
Change in Federal regulations	48
To meet a specific need of SFAs	34
Perceived need for more State involvement	22
Other	4
Missing	4
Total States	23
Decreased^b	
Reduced State Agency staff	50
Increased administrative burden in other areas	50
Total States	4

^aN and percentages reflect States where the level of training had increased since SY 1985-86. Column does not total to 100 percent because respondents could supply more than one reason for the increase.

^bN and percentages reflect States where the level of training and technical assistance had decreased since SY 1985-86.

Data Source: State Agency Survey.

Only 4 States indicated that training levels had declined between SY 1985-86 and SY 1988-89. One-half of these States attributed the change to a reduction in staff; the other half indicated that an increased work load in other administrative areas had curtailed the amount of time available for training and technical assistance activities.

TRAINING AND TECHNICAL ASSISTANCE RECEIVED BY SFAS

Amount and Type of Training Received

An estimated 51 percent of SFAs received some training or technical assistance during SY 1988-89 (Exhibit X.5). About one-quarter of SFAs received training or technical assistance in one or two topic areas, 18 percent covered 3-5 topic areas, and 10 percent covered 6-9 topics.

The receipt of training and technical assistance in SY 1988-89 did vary across SFA subgroups. As Exhibit X.5 shows, public SFAs, SFAs that participate in both the NSLP and SBP, large SFAs and high-poverty SFAs were more likely to have received training and technical assistance than their respective counterparts. Private SFAs appear to receive the least training and technical assistance; fewer than one-quarter of these SFAs received any training or technical assistance in SY 1988-89.

The topic areas most frequently covered in training received by SFAs were program regulations and procedures, and food sanitation and safety (Exhibit ET-X.2). One-half or more of the SFAs that received training or technical assistance in SY 1988-89 received assistance in these areas. Over one-third of SFAs that received training or technical assistance covered menu planning, food preparation, recordkeeping, food merchandising and use of commodities. Contract procedures were covered in the training and technical assistance received by only 13 percent of SFAs.

Recipients of Training and Technical Assistance

The training and technical assistance received by SFAs appears to have been targeted to appropriate audiences. SFA managers and school administrators received most of the training related to food purchasing, contracting procedures, recordkeeping, merchandising and program regulations and procedures (Exhibit ET-X.3). Cafeteria workers were appropriately emphasized in training related to food sanitation and safety, menu planning, food preparation and use of commodities. Training programs related to these topics were targeted toward mixed groups, both

Exhibit X.5

Training and Technical Assistance Received by SFAs:
 Number of Topics Covered
 (SY 1988-89)

	Number of Topics				Total SFAs (Weighted)
	None	1-2	3-5	6-9	
TOTAL SAMPLE	49%	24%	18%	10%	14,259
Type of SFA*					
Public	42	26	21	11	11,275
Private	77	13	4	5	2,984
Participation in SBP*					
NSLP and SBP	36	24	25	14	3,849
NSLP only	53	24	15	8	10,410
SFA Size					
Small (1-999)*	59	20	8	13	5,479
Medium (1000-4999)	35	28	27	9	4,890
Large (5000+)‡	29	28	32	11	1,743
Poverty Level of SFA*					
High (60% or more F&R)	35	14	38	13	1,934
Low (0-59.9% F&R)	47	27	16	11	10,168

*Chi-square test of independence is statistically significant at the .01 level.

‡Reference group used in comparisons: Large SFAs vs. Small SFAs; Medium SFAs vs. Large SFAs.

Data Source: Year One SFA Manager Telephone Survey.

management and cafeteria workers, in 20-26 percent of SFAs.

Training Providers

Most training and technical assistance received by SFAs is provided by the cognizant State Agency (Exhibit ET-X.4). State Agencies tend to be the sole providers of training in areas closely related to Child Nutrition Program operations, i.e., menu planning, recordkeeping, program regulations and procedures, and use of commodities. In over three-quarters of the SFAs that received assistance in these areas, State Agencies provided the training. State Agencies also provided training in approximately 60 percent of all other cases.

SFAs received limited amounts of training from other providers. Colleges and universities supplied training in food sanitation and safety and food preparation in 18 and 12 percent, respectively, of the SFAs that received training in these areas. A variety of other agencies and organizations including professional associations, local health agencies and the like also provide some training to SFAs; no individual organization or agency is substantially involved.

Perceived Training and Technical Assistance Needs

Many SFA managers did indicate a need for additional training and technical assistance (Exhibit X.6). The greatest need appears to be in the area of merchandising. Fifty-one percent of SFAs reported a need in this area; 11 percent of SFAs indicated a substantial need. Forty-nine percent of SFAs also indicated the need for training or technical assistance related to food sanitation and safety, although the perceived level of need (a lot vs. a little) is less substantial. Interestingly, more SFAs (57 percent) received training or technical assistance related to food sanitation and safety during SY 1988-89 than any other topic (see Exhibit ET-X.2). The continued need for training in this area probably reflects the fact that food service workers need constant reinforcement in this area.

Forty percent or more of SFA Managers indicated a need for additional assistance related to menu planning, recordkeeping, program regulations and procedures, and use of donated commodities. Most of these SFAs indicated a slight rather than substantial need. Finally, approximately one-third of SFAs identified training needs in the areas of food purchasing, food preparation, and contract procedures.

Exhibit X.6

Training and Technical Assistance
Needs Reported by SFA Managers
(SY 1988-89)

Topic Area	Reported Level of Need			
	A Lot	A Little	None	Missing
Food Purchasing	3%	36%	47%	14%
Food Sanitation and Safety	7	42	39	13
Menu Planning	7	39	41	13
Food Preparation	9	38	40	13
Contract Procedures	11	24	50	15
Recordkeeping	6	34	47	13
Merchandising	11	40	36	14
Regulations and Procedures	10	37	40	13
Use of Commodities	7	36	44	13
Total SFAs (Weighted)				14,259

Data Source: Year One SFA Manager Telephone Survey.

The majority of SFAs that identified specific training needs felt that the training they require can be obtained through their State Agencies (Exhibit X.7). The greatest unmet training need appears to be in the area of contract procedures. Thirty-five percent of SFA managers expressed a need in this area (Exhibit X.6). Of these, 24 percent felt that such training was not available through their State Agency. Results from the State Agency Survey corroborate this unmet need, as they indicate that 30 percent of State Agencies do not provide training or technical assistance related to contracting (see Exhibit X.1).

Exhibit X.7

SFA Managers' Perceptions Regarding State Agencies
Ability to Meet Training/Technical Assistance Needs
(SY 1988-89)

Topic Area	Available Through State Agency?		
	Yes	No	Missing
Food Purchasing	71%	12%	17%
Food Sanitation	90	5	5
Menu Planning	79	10	12
Food Preparation	84	11	5
Contract Procedures	44	24	31
Recordkeeping	86	8	7
Merchandising	66	17	17
Regulations and Procedures	84	6	10
Use of Commodities	75	15	10

Percentages for each topic reflect SFAs that indicated a need for some training or technical assistance in that area.

Data Source: Year One SFA Manager Telephone Survey

PART 3: EXTENDED STATISTICAL TABLES

Student Participation in the NSLP and SBP
Exhibits ET III.1 - ET III.6 - Pages 182-187

Meal Prices and Reported Meal Costs
Exhibits ET IV.1 - ET IV.18 - Pages 188-205

The Food Donation Program
Exhibits ET V.1 - ET V.29 - Pages 206 - 234

The School Breakfast Program
Exhibits ET VI.1 - ET VI.6 - Pages 235 - 240

Meal Counting Systems
Exhibits ET VII.1 - ET VII.4 - Pages 241 - 244

Food Service Management Companies
Exhibits ET VIII.1 - ET VIII.2 - Pages 245 - 246

Food Service Program Characteristics
Exhibits ET IX.1 - ET IX.14 - Pages 248 - 260

Training and Technical Assistance
Exhibits ET X.1 - ET X.4 - Pages 261 - 265

Exhibit ET-III.1

SFA Size by Type of SFA
(SY 1987-88)

	SFA Size							
	Small (1-999)		Medium (1,000-4,999)		Large (5,000+)		All SFAs	
	#	%	#	%	#	%	#	%
TOTAL SAMPLE	7,067	49.1%	5,464	38.0%	1,848	12.9%	14,379	100%
Type of SFA								
Public	4,005	35.5	5,446	48.2	1,838	16.3	11,288	100
Private	3,062	99.1	19	0.6	10	0.3	3,091	100
Participation in SBP								
NSLP & SBP	1,404	36.3	1,457	37.7	1,005	26.0	3,867	100
NSLP Only	5,663	53.9	4,007	38.1	843	8.0	10,512	100
SFA Poverty Level								
High (60% or more F&R)	1,144	50.5	675	29.8	448	19.8	2,267	100
Low (0-59% F&R)	5,923	48.9	4,789	39.5	1,400	11.6	12,112	100
School Type								
Elementary Only	3,563	96.4	104	2.8	27	0.7	3,694	100
Secondary Only	613	76.4	144	17.9	46	5.7	803	100
Both Elementary and Secondary	2,891	29.3	5,217	52.8	1,775	18.0	9,883	100

Data Source: Year One SFA Manager Mail Survey

Exhibit ET-III.2

School Type by Type of SFA
(SY 1987-88)

	School Type							
	Elementary Only		Middle/Secondary Only		Elementary and Middle/Secondary		All SFAs	
	#	%	#	%	#	%	#	%
TOTAL SAMPLE	3,694	25.7%	803	5.6%	9,883	68.7%	14,379	100%
Type of SFA								
Public	1,197	10.2	345	3.1	9,746	86.3	11,288	100
Private	2,497	80.8	458	14.8	136	4.4	3,091	100
Participation in SBP								
NSLP & SBP	817	21.1	75	1.9	2,975	76.9	3,867	100
NSLP Only	2,877	27.4	727	6.9	6,908	65.7	10,512	100
SFA Size								
Small (1-999)	3,563	50.4	613	8.7	2,891	40.9	7,067	100
Medium (1,000-4,999)	104	1.9	144	2.6	5,217	95.5	5,464	100
Large (5,000+)	27	1.5	46	2.5	1,775	96.0	1,848	100
SFA Poverty Level								
High (60% or more F&R)	622	27.4	78	3.5	1,567	69.1	2,267	100
Low (0-59% F&R)	3,071	25.4	724	6.0	8,316	68.7	12,112	100

Data Source: Year One SFA Manager Mail Survey

Exhibit ET-111.3

SFA Control by Type of SFA
(SY 1987-88)

	SFA Type					
	Public		Private		All SFAs	
	#	%	#	%	#	%
TOTAL SAMPLE	11,288	78.5%	3,091	21.5%	14,379	100%
Participation in SBP						
NSLP & SBP	3,556	92.0	311	8.0	3,867	100
NSLP Only	7,732	73.6	2,780	26.4	10,512	100
SFA Size						
Small (1-999)	4,005	56.7	3,062	43.3	7,067	100
Medium (1,000-4,999)	5,446	99.7	19	0.3	5,464	100
Large (5,000+)	1,838	99.5	10	0.5	1,848	100
SFA Poverty Level						
High (60% or more F&R)	1,897	83.6	371	16.4	2,267	100
Low (0-59% F&R)	9,392	77.5	2,720	22.5	12,112	100
School Type						
Elementary Only	1,197	32.4	2,497	67.6	3,694	100
Secondary Only	345	42.9	458	57.1	803	100
Both Elementary and Secondary	9,746	98.6	136	1.4	9,883	100

Data Source: Year One SFA Manager Mail Survey

Exhibit E1-111.4

Participation in SBP by Type of SFA
(SY 1987-88)

	Participation in SBP					
	NSLP & SBP		NSLP Only		All SFAs	
	#	%	#	%	#	%
TOTAL SAMPLE	3,867	26.9%	10,512	73.1%	14,379	100.0%
Type of SFA						
Public	3,556	31.5	7,732	68.5	11,288	100
Private	311	10.1	2,780	89.9	3,091	100
SFA Size						
Small (1-999)	1,404	19.9	5,663	80.1	7,067	100
Medium (1,000-4,999)	1,457	26.7	4,007	73.3	5,464	100
Large (5,000+)	1,005	54.4	843	45.6	1,848	100
SFA Poverty Level						
High (60% or more F&R)	1,589	70.1	678	29.9	2,267	100
Low (0-59% F&R)	2,277	18.8	9,834	81.2	12,112	100
School Type						
Elementary Only	817	22.1	2,877	77.9	3,694	100
Secondary Only	75	9.4	727	90.6	803	100
Both Elementary and Secondary	2,975	30.1	6,908	69.9	9,883	100

Data Source: Year One SFA Manager Mail Survey

Exhibit ET-111.5

SFA Poverty Level by Type of SFA
(SY 1987-88)

	SFA Poverty Level					
	High (60% or more F&R)		Low (0-59% F&R)		All Schools	
	#	%	#	%	#	%
TOTAL SAMPLE	2,267	15.8%	12,112	84.2%	14,379	100%
Type of SFA						
Public	1,897	16.8	9,392	83.2	11,288	100
Private	371	12.0	2,720	80.0	3,091	100
Participation in SBP						
NSLP & SBP	1,589	41.1	2,277	58.9	3,867	100
NSLP Only	678	6.4	9,834	93.6	10,512	100
SFA Size						
Small (1-999)	1,144	16.2	5,923	83.8	7,067	100
Medium (1,000-4,999)	675	12.4	4,789	87.6	5,464	100
Large (5,000+)	448	24.2	1,400	75.8	1,848	100
School Type						
Elementary Only	622	16.8	3,071	83.2	3,694	100
Secondary Only	78	9.7	724	90.3	803	100
Both Elementary and Secondary	1,567	15.9	8,316	84.1	9,883	100

Data Source: Year One SFA Manager Mail Survey

Exhibit ET-III.6

Student NSLP Participation Rates by Type of School and SFA
(SY 1987-88)

	Participation Rates					
	Elementary Schools		Middle/Secondary Schools		All Schools	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
TOTAL SAMPLE	71.6%*	18.6%	48.7%	20.2%	59.1%	18.1%
Type of SFA						
Public	71.7*	18.4	48.5	20.1	59.1	17.8
Private	70.5	21.7	na	na	57.9	28.2
Participation in SBP						
NSLP and SBP	75.6*	15.7	51.5	19.4	63.1	16.6
NSLP only	66.2*	20.8	45.5	20.6	54.2	18.6
SFA Size						
Small (1-999)	68.2	19.8	61.6	21.6	67.8	18.6
Medium (1000-4999)	70.8*	19.8	51.0	19.8	60.4	18.8
Large (5000+)	72.7*	17.6	44.5	19.9	57.5	17.3
Poverty Level of SFA						
High (60% or more F&R)	78.4*	15.0	55.4	22.1	66.5	16.6
Low (0-59% F&R)	68.4*	19.2	46.3	18.9	56.0	17.8

*Difference between elementary and secondary participation rates is statistically at the .01 level.

Note: Elementary school participation rates based on data from 561 SFAs (50.4 percent of the SFAs that completed the Year One Mail Survey), and secondary school participation rates are based on data from 399 SFAs (35.8 percent). These SFAs were the only ones that provided data separately for elementary and secondary schools.

Data Source: Year One SFA Manager Mail Survey

Exhibit ET-IV.1

Average NSLP Meal Prices for Paid Lunches
in Elementary and Middle/Secondary Schools
(SY 1988-89)

	Elementary Schools			Middle/Secondary Schools			All Schools		
	Mean	S.D.	Total SFAs (Weighted)	Mean	S.D.	Total SFAs (Weighted)	Mean	S.D.	Total SFAs (Weighted)
TOTAL SAMPLE	\$.93	\$.19	12,262	\$1.03	\$.21	9,695	\$.98	\$.21	13,015
Type of SFA									
Public	.93	.20	10,122	1.02	.21	9,148	.97	.20	10,457
Private	.93	.17	2,141	na	na	547	.99	.21	2,558
Participation in SBP									
NSLP and SBP	.87*	.19	3,515	.96*	.21	2,766	.91*	.19	3,550
NSLP only	.95	.19	8,747	1.06	.21	6,929	1.00	.21	9,465
SFA Size									
Small (1-999)	.92	.19	5,704	1.01	.24	3,170	.96	.21	6,277
Medium (1000-4999)	.94	.19	4,823	1.03	.19	4,831	.99	.20	4,965
Large (5000+)‡	.94	.20	1,735	1.06	.22	1,694	1.00	.21	1,773
Poverty Level of SFA									
High (60% or more F&R)	.85*	.24	2,043	.87*	.19	1,519	.88*	.24	2,075
Low (0-59% F&R)	.94	.18	10,219	1.06	.20	8,176	.99	.19	10,940

*Difference is statistically significant at the .01 level.

‡Reference group used in comparisons: Large SFAs vs. Small SFAs; Large SFAs vs. Medium SFAs.

na: Unweighted sample size less than 30 SFAs.

Data Source: Year One SIA Manager Mail Survey.

Exhibit ET-IV.2

Average NSLP Meal Prices for Reduced-Price Lunches
in Elementary and Middle/Secondary Schools
(SY 1988-89)

	Elementary Schools			Middle/Secondary Schools			All Schools		
	Mean	S.D.	Total SFAs (Weighted)	Mean	S.D.	Total SFAs (Weighted)	Mean	S.D.	Total SFAs (Weighted)
TOTAL SAMPLE	\$.38	\$.06	11,940	\$.38	\$.06	9,341	\$.38	\$.06	12,663
Type of SFA									
Public	.38	.06	9,795	.38	.06	8,794	.38	.06	10,100
Private	.38	.05	2,145	na	na	547	.38	.05	2,563
Participation in SBP									
NSLP and SBP	.36	.07	3,487	.36	.07	2,663	.36	.07	3,522
NSLP only	.38	.05	8,453	.38	.05	6,678	.38	.05	9,141
SFA Size									
Small (1-999)	.38	.05	5,578	.38	.06	3,095	.38	.06	6,130
Medium (1000-4999)	.38	.06	4,693	.38	.06	4,685	.38	.06	4,825
Large (5000+)	.36	.07	1,669	.37	.07	1,561	.37	.07	1,708
Poverty Level of SFA									
High (60% or more F&R)	.37	.06	2,034	.38	.06	1,505	.38	.06	2,066
Low (0-59% F&R)	.38	.06	9,906	.38	.06	7,836	.38	.06	10,596

na: Unweighted sample size less than 30 SFAs.

Note: None of the differences between SFA subgroups are statistically significant.

Data Source: Year One SFA Manager Mail Survey.

Exhibit EI-IV.3

Average NSLP Meal Prices for Adult Lunches
in Elementary and Middle/Secondary Schools
(SY 1988-89)

	Elementary Schools			Middle/Secondary Schools			All Schools		
	Mean	S.D.	Total SFAs (Weighted)	Mean	S.D.	Total SFAs (Weighted)	Mean	S.D.	Total SFAs (Weighted)
TOTAL SAMPLE	\$1.55	\$.27	10,844	\$1.60	\$.26	8,267	\$1.56	\$.27	11,591
Type of SFA									
Public	1.59*	.27	8,917	1.61	.27	7,711	1.59*	.26	9,232
Private	1.38	.24	1,927	na	na	556	1.44	.25	2,359
Participation in SBP									
NSLP and SBP	1.56	.25	3,210	1.54*	.25	2,529	1.56	.25	3,267
NSLP only	1.55	.28	7,634	1.63	.26	5,738	1.56	.28	8,325
SFA Size									
Small (1-999)	1.48	.29	4,714	1.57	.28	2,397	1.50	.28	5,297
Medium (1000-4999)	1.61	.24	4,515	1.61	.23	4,831	1.61	.23	4,641
Large (5000+)‡	1.62	.28	1,615	1.64	.30	1,450	1.63	.28	1,654
Poverty Level of SFA									
High (60% or more F&R)	1.61	.21	1,870	1.61	.21	1,488	1.62	.22	1,917
Low (0-59% F&R)	1.54	.28	8,974	1.60	.27	6,779	1.55	.28	9,675

*Difference is statistically significant at the .01 level.

‡Reference group used in comparisons: Large SFAs vs. Small SFAs; Large SFAs vs. Medium SFAs.

na: Unweighted sample size less than 30 SFAs.

Data Source: Year One SFA Manager Mail Survey.

Exhibit ET-IV.4

SBP Meal Prices for Paid Breakfasts
in Elementary and Middle/Secondary Schools
(SY 1988-89)

	Elementary Schools			Middle/Secondary Schools			All Schools		
	Mean	S.D.	Total SFAs (Weighted)	Mean	S.D.	Total SFAs (Weighted)	Mean	S.D.	Total SFAs (Weighted)
TOTAL SAMPLE	\$.48	\$.13	3,925	\$.50	\$.15	2,654	\$.49	\$.14	4,060
Type of SFA									
Public	.48	.13	3,778	.50	.15	2,637	.49	.14	3,906
Private	.56	.17	147	na	na	27	.55	.17	154
SFA Size									
Small (1-999)	.44	.13	1,278	.39*	.10	576	.44*	.13	1,285
Medium (1000-4999)	.49	.12	1,568	.51	.14	1,276	.50	.13	1,642
Large (5000+)‡	.51	.14	1,079	.55	.14	801	.53	.15	945
Poverty Level of SFA									
High (60% or more F&R)	.45	.12	1,371	.43*	.11	856	.45*	.12	1,381
Low (0-59% F&R)	.50	.13	2,554	.53	.15	1,799	.51	.14	2,680

*Difference is statistically significant at the .01 level.

‡Reference group used in comparisons: Large SFAs vs. Small SFAs; Large SFAs vs. Medium SFAs.

na: Unweighted sample size less than 30 SFAs.

Data Source: Year One SFA Manager Mail Survey.

Exhibit ET-IV.5

Average SBP Meal Prices for Reduced-Price Breakfasts
in Elementary and Middle/Secondary Schools
(SY 1988-89)

	Elementary Schools			Middle/Secondary Schools			All Schools		
	Mean	S.D.	Total SFAs (Weighted)	Mean	S.D.	Total SFAs (Weighted)	Mean	S.D.	Total SFAs (Weighted)
TOTAL SAMPLE	\$.25	\$.06	3,914	\$.25	\$.06	2,631	\$.26	\$.06	4,036
Type of SFA									
Public	.25	.06	3,775	.25	.06	2,614	.25	.06	3,890
Private	.27	.06	140	na	na	17	.27	.06	146
SFA Size									
Small (1-999)	.25	.07	1,259	.23	.08	565	.25	.07	1,265
Medium (1000-4999)	.26	.05	1,566	.25	.05	1,269	.26	.05	1,630
Large (5000+)	.26	.07	1,090	.26	.06	798	.26	.06	1,141
Poverty Level of SFA									
High (60% or more F&R)	.25	.06	1,352	.24	.06	847	.25	.06	1,365
Low (0-59.9% F&R)	.26	.06	2,562	.25	.06	1,784	.26	.06	2,671

na: Unweighted sample size less than 30 SFAs.

Note: None of the differences between SFA subgroups are statistically significant.

Data Source: Year One SFA Manager Mail Survey.

Exhibit EI-IV.6

Average SBP Meal Prices for Adult Breakfasts
in Elementary and Middle/Secondary Schools
(SY 1988-89)

	Elementary Schools			Middle/Secondary Schools			All Schools		
	Mean	S.D.	Total SFAs (Weighted)	Mean	S.D.	Total SFAs (Weighted)	Mean	S.D.	Total SFAs (Weighted)
TOTAL SAMPLE	\$.74	\$.18	3,417	\$.76	\$.20	2,364	\$.75	\$.19	3,541
Type of SFA									
Public	.73 [#]	.18	3,313	.75	.19	2,337	.74 [#]	.18	3,418
Private	.93	.12	104	na	na	27	.93	.23	122
SFA Size									
Small (1-999)	.72	.18	1,140	.67	.25	552	.73	.19	1,159
Medium (1000-4999)	.73	.18	1,371	.76	.18	1,137	.74	.20	1,436
Large (5000+)‡	.78	.18	905	.82	.14	676	.79	.19	945
Poverty Level of SFA									
High (60% or more F&R)	.76	.16	1,245	.76	.20	810	.78	.18	1,265
Low (0-59.9% F&R)	.73	.19	2,172	.75	.20	1,555	.74	.20	2,276

[#]Difference is statistically significant at the .01 level.

‡Reference group used in comparisons: Large SFAs vs. Small SFAs; Large SFAs vs. Medium SFAs.

na: Unweighted sample size less than 30 SFAs.

Data Source: Year One SFA Manager Mail Survey

Exhibit ET-IV.7

Change in NSLP Meal Prices for Paid Lunches
in Elementary and Middle/Secondary Schools
(SY 1987-88 to SY 1988-89)

	Elementary Schools		Middle/Secondary Schools	
	Percent of SFAs	Total SFAs (Weighted)	Percent of SFAs	Total SFAs (Weighted)
No Price Change	70%	8,231	64%	6,001
Increase \$.01 to .099	8	1,004	10	937
Increase \$.10 to .149	12	1,680	15	1,434
Increase \$.15 to .199	4	460	6	522
Increase \$.20 to .249	2	179	3	241
Increase \$.25 to .50	2	195	2	207
Price Decrease	0	52	1	63
Missing		1,745		1,281
Valid N		11,831		9,405
Total Weighted N		13,577		10,685
Average Price Increase ¹		\$.11		\$.11

Note: May not total to 100 percent due to rounding.

¹Based on all cases where prices were increased between SY 1987-88 and SY 1988-89.

Data Source: Year One SFA Manager Mail Survey.

Exhibit ET-IV.8

Change in NSLP Meal Prices for Paid Lunches
in Elementary and Middle/Secondary Schools
(SY 1983-84 to SY 1988-89)

	Elementary Schools		Middle/Secondary Schools	
	Percent of SFAs	Total SFAs (Weighted)	Percent of SFAs	Total SFAs (Weighted)
No Price Change	30%	1,713	19%	903
Increase \$.01 to .099	10	553	9	407
Increase \$.10 to .149	21	1,212	19	902
Increase \$.15 to .199	14	822	19	877
Increase \$.20 to .249	9	507	8	396
Increase \$.25 to .299	5	311	10	455
Increase \$.30 to .349	2	123	4	192
Increase \$.35 to .399	2	90	2	97
Increase \$.40 to .449	2	122	9	406
Increase \$.50 or more	3	195	2	84
Price Decrease	0	24	0	8
Missing		7,906		5,958
Valid N		5,670		4,278
Total Weighted N		13,577		10,685
Average Price Increase ¹		\$.17		\$.19
Average Incremental Increase ¹		\$.11		\$.11
Average Number of Increases ¹		1.7		2.2

¹Based on all cases where prices were increased between SY 1983-84 and SY 1988-89.

Data Source: Year One SFA Manager Mail Survey.

Exhibit ET-IV.9

Change in NSLP Meal Prices
for Reduced-Price Lunches
in Elementary and Middle/Secondary Schools
(SY 1987-88 to SY 1988-89)

	Elementary Schools		Middle/Secondary Schools	
	Percent of SFAs	Total SFAs (Weighted)	Percent of SFAs	Total SFAs (Weighted)
No Price Change	98%	11,273	98%	8,980
Price Increase	2	214	2	170
Price Decrease	0	6	0	4
Missing		2,094		1,531
Valid N		11,482		9,154
Total Weighted N		13,577		10,865
Average Price Increase ¹		\$.10		\$.10

Note: May not total to 100 percent due to rounding.

¹Based on all cases where prices were increased between SY 1987-88 and SY 1988-89.

Data Source: Year One SFA Manager Mail Survey.

Exhibit ET-IV.10

Change in NSLP Meal Prices
for Reduced-Price Lunches
in Elementary and Middle/Secondary Schools
(SY 1983-84 to SY 1988-89)

	Elementary Schools		Middle/Secondary Schools	
	Percent of SFAs	Total SFAs (Weighted)	Percent of SFAs	Total SFAs (Weighted)
No Price Change	77%	4,227	83%	3,737
Increase \$.01 to \$.10	7	367	5	234
Increase \$.10 or more	14	750	7	310
Price Decrease	3	158	5	244
Missing		8,076		6,159
Valid N		5,501		4,527
Total Weighted N		13,577		10,685
Average Price Increase ¹		\$.10		\$.11
Average Incremental Increase ¹		\$.09		\$.08
Average Number of Increases ¹		1.1		1.5

¹Based on all cases where prices were increased between SY 1983-84 and SY 1988-89.

Data Source: Year One SFA Manager Mail Survey.

Exhibit ET-IV.11

Change in NSLP Meal Prices
for Adult Lunches
in Elementary and Middle/Secondary Schools
(SY 1987-88 to SY 1988-89)

	Elementary Schools		Middle/Secondary Schools	
	Percent of SFAs	Total SFAs (Weighted)	Percent of SFAs	Total SFAs (Weighted)
No Price Change	57%	5,902	53%	4,293
Increase \$.01 to .099	11	1,172	13	1,079
Increase \$.10 to .149	9	914	10	827
Increase \$.15 to .199	6	672	6	485
Increase \$.20 to .249	2	205	2	194
Increase \$.25 to .299	8	794	7	564
Increase \$.30 or more	6	588	6	491
Price Decrease	1	113	1	106
Missing		3,216		2,646
Valid N		10,361		8,040
Total Weighted N		13,577		10,685
Average Price Increase ¹		\$.17		\$.16

¹Based on all cases where prices were increased between SY 1987-88 and SY 1988-89.

Data Source: Year One SFA Manager Mail Survey.

Exhibit ET-IV.12

Change in NSLP Meal Prices
for Adult Lunches
in Elementary and Middle/Secondary Schools
(SY 1983-84 to SY 1988-89)

	Elementary Schools		Middle/Secondary Schools	
	Percent of SFAs	Total SFAs (Weighted)	Percent of SFAs	Total SFAs (Weighted)
No Price Change	20%	1,036	13%	573
Increase \$.01 to .099	4	236	5	222
Increase \$.10 to .149	12	607	10	437
Increase \$.15 to .199	12	623	12	526
Increase \$.20 to .249	7	392	8	356
Increase \$.25 to .299	16	850	19	813
Increase \$.30 to .349	7	351	8	350
Increase \$.35 to .399	4	225	6	237
Increase \$.40 to .449	4	185	7	319
Increase \$.45 or more	14	755	11	452
Price Decrease	0	7	0	8
Missing		8,312		6,392
Valid N		5,265		4,294
Total Weighted N		13,577		10,685
Average Price Increase ¹		\$.30		\$.27
Average Incremental Increase ¹		\$.18		\$.19
Average Number of Increases ¹		1.8		1.6

¹Based on all cases where prices were increased between SY 1983-84 and SY 1988-89.

Note: May not total to 100 percent due to rounding.

Data Source: Year One SFA Manager Mail Survey.

Exhibit ET-IV.13

Change in SBP Meal Prices
for Paid Breakfasts
in Elementary and Middle/Secondary Schools
(SY 1987-88 to SY 1988-89)

	Elementary Schools		Middle/Secondary Schools	
	Percent of SFAs	Total SFAs (Weighted)	Percent of SFAs	Total SFAs (Weighted)
No Price Change	84%	3,113	79%	2,078
Increase \$.01 to \$.099	6	218	7	171
Increase \$.10 to .149	8	288	6	166
Increase \$.15 or more	2	84	7	189
Price Decrease	0	22	1	20
Missing		872		1,125
Valid N		3,726		2,625
Total Weighted N		4,597		3,750
Average Price Increase ¹		\$.10		\$.12

¹Based on all cases where prices were increased between SY 1987-88 and SY 1988-89.

Data Source: Year One SFA Manager Mail Survey.

Exhibit ET-IV.14

Change in SBP Meal Prices
for Paid Breakfasts
in Elementary and Middle/Secondary Schools
(SY 1983-84 to SY 1988-89)

	Elementary Schools		Middle/Secondary Schools	
	Percent of SFAs	Total SFAs (Weighted)	Percent of SFAs	Total SFAs (Weighted)
No Price Change	62%	1,142	61%	700
Increase \$.01 to .099	12	215	21	237
Increase \$.10 to .149	9	164	13	145
Increase \$.15 or more	17	310	5	58
Price Decrease	0	5	0	5
Missing		2,723		2,605
Valid N		1,834		1,145
Total Weighted N		4,597		3,750
Average Price Increase ¹		\$.11		\$.09
Average Incremental Increase ¹		\$.10		\$.08
Average Number of Increases ¹		1.1		1.1

¹Based on all cases where prices were increased between SY 1983-84 and SY 1988-89.

Data Source: Year One SFA Manager Mail Survey.

Exhibit ET-IV.15

Change in SBP Meal Prices
for Reduced-Price Breakfasts
in Elementary and Middle/Secondary Schools
(SY 1987-88 to SY 1988-89)

	Elementary Schools		Middle/Secondary Schools	
	Percent of SFAs	Total SFAs (Weighted)	Percent of SFAs	Total SFAs (Weighted)
No Price Change	96%	3,547	96%	2,496
Price Increase	3	117	3	92
Price Decrease	1	41	1	18
Missing		892		1,144
Valid N		3,705		2,606
Total Weighted N		4,597		3,750
Average Price Increase ¹		\$.09		\$.10

¹Based on all cases where prices were increased between SY 1987-88 and SY 1988-89.

Data Source: Year One SFA Manager Mail Survey.

Exhibit ET-IV.16

Change in SBP Meal Prices
for Reduced-Price Breakfasts
in Elementary and Middle/Secondary Schools
(SY 1983-84 to SY 1988-89)

	Elementary Schools		Middle/Secondary Schools	
	Percent of SFAs	Total SFAs (Weighted)	Percent of SFAs	Total SFAs (Weighted)
No Price Change	77%	1,449	87%	1,027
Increase \$.01 to \$.099	2	39	2	22
Increase \$.10 to .149	13	252	1	11
Increase \$.15 or more	5	90	7	82
Price Decrease	3	43	3	37
Missing		2,724		2,571
Valid N		1,873		1,179
Total Weighted N		4,597		3,750
Average Price Increase ¹		\$.11		\$.13
Average Incremental Increase ¹		\$.09		\$.08
Average Number of Increases ¹		1.2		1.6

¹Based on all cases where prices were increased between SY 1983-84 and SY 1988-89.

Data Source: Year One SFA Manager Mail Survey.

Exhibit ET-IV.17

Change in SBP Meal Prices
for Adult Breakfasts
in Elementary and Middle/Secondary Schools
(SY 1987-88 to SY 1988-89)

	Elementary Schools		Middle/Secondary Schools	
	Percent of SFAs	Total SFAs (Weighted)	Percent of SFAs	Total SFAs (Weighted)
No Price Change	83%	2,674	78%	1,789
Increase \$.01 to .099	7	214	10	225
Increase \$.10 to .149	2	71	2	41
Increase \$.15 or more	7	213	10	223
Price Decrease	2	54	0	8
Missing		1,370		1,462
Valid N		3,227		2,288
Total Weighted N		4,597		3,750
Average Price Increase ¹		\$.15		\$.16

¹Based on all cases where prices were increased between SY 1987-88 and SY 1988-89.

Data Source: Year One SFA Manager Mail Survey.

Exhibit ET-IV.18

Change in SBP Meal Prices
for Adult Breakfasts
in Elementary and Middle/Secondary Schools
(SY 1983-84 to SY 1988-89)

	<u>Elementary Schools</u>		<u>Middle/Secondary Schools</u>	
	Percent of SFAs	Total SFAs (Weighted)	Percent of SFAs	Total SFAs (Weighted)
No Price Change	72%	1,049	66%	702
Increase \$.01 to .099	8	113	10	106
Increase \$.10 to .149	8	116	9	95
Increase \$.15 to .199	3	38	2	22
Increase \$.20 or more	10	150	12	131
Missing		3,131		2,694
Valid N		1,467		1,056
Total Weighted N		4,597		3,750
Average Price Increase ¹		\$.15		\$.15
Average Incremental Increase ¹		\$.11		\$.11
Average Number of Increases ¹		1.3		1.4

¹Based on all cases where prices were increased between SY 1983-84 and SY 1988-89.

Note: May not total to 100 percent due to rounding.

Data Source: Year One SFA Manager Mail Survey.

Exhibit ET-V.1

Total Dollar Value of Donated Commodities Utilized
in State Processing Agreements
(SY 1987-88)

Dollar Value	Number/Percent of States	
	(n)	(%)
Less than \$100,000	4	10%
\$100,000-\$499,999	7	18
\$500,000-\$1,999,999	10	26
\$2,000,000 or more	3	8
Missing	14	37

Based on N = 38 (Number of States with processing contracts).

Data Source: State Agency Survey.

Exhibit ET-V.2

Commodities Processed Under
State Processing Agreements
(SY 1987-88)

Commodity ^{1,2}	Number/Percent of States	
	(n)	(%)
Cheese	37	97%
Flour	28	74
Oil	28	74
Chicken, all forms	24	63
Turkey, all forms	19	50
Beef, frozen	18	47
Non-Fat Dried Milk	14	37
Ground Beef	13	34
Pork, frozen	13	34
Cherries, frozen	10	26
Butter	9	24
Ground Pork	7	18
Tomato Paste	4	10
Honey	2	5
Peanut Butter	2	5
Shortening	2	5
Canned Beef	1	3
Apples	1	3
Prunes	1	3
Blackberries	1	3

¹Based on respondents' report of use of up to 10 commodities that were greatest in USDA-assigned value.

²When reporting commodity usage, most respondents identified the general type of commodity (e.g., chicken, etc.) and did not further specify the form in which the commodity was received (e.g., canned or frozen; whole chickens vs. cut-up chickens.)

Based on N = 38 (Number of States with processing contracts).

Data Source: State Agency Survey.

Exhibit ET-V.3

End-Products Produced
Under State Processing Agreements
(SY 1987-88)

End Product ¹	Number/Percent of States	
	(n)	(%)
Pizza	26	68%
Bread and Rolls	26	68
Beef Patties	25	66
Chicken Nuggets	20	52
Salad Dressing	19	50
Turkey Roast/Breast	12	32
Mayonnaise	13	34
Beef Steak	11	29
Ice Cream/Ice Milk	9	24
Chicken Patties	8	21
Turkey Bologna	8	21
Fruit Tarts/Turnovers	8	21
Burritos/Empanadas	7	18
Pork Patties	6	16
Cookies	6	16
Meatballs	6	16
Turkey Ham	5	13
Breaded Chicken Parts	5	13
Cold Cuts, Unspecified	5	13
Turkey Hotdogs	5	13
Sausage, Unspecified	4	10
Beef Nuggets	4	10
Beef Products, Unspecified	3	8
Turkey Pastrami	3	8
Milkshakes	3	8
Chicken Fried Steak	3	8
Cheese	3	8
Crackers	3	8
Puddings	3	8
Ground Pork	2	5
Beef Roasts	2	5
Pie Filling	2	5
Salisbury Steaks	2	5
Egg Rolls	2	5
Pasta Products	2	5
Breaded Fish and Cheese	1	3
Fruit Juices	1	3
Ketchup	1	3
Gravy Mixes	1	3
Deboned Turkey	1	3
Yogurt	1	3

-continued-

¹Based on respondents' report of end-products produced from top 10 commodities utilized.

Based on N = 38 (Number of States with processing contracts).

Exhibit ET-V.3
(continued)

End Product ¹	<u>Number/Percent of States</u>	
	(n)	(%)
Chili Con Carne	1	3
Brownies	1	3
Margarine	1	3
Pot Pies	1	3
Pork Fritters	1	3
Pork Steaks	1	3

¹Based on respondents' report of end-products produced from top 10 commodities utilized.

Based on N = 38 (Number of States with processing contracts).

Data Source: State Agency Survey.

Exhibit ET-V.4

Use of Rebate, Discount and Fee-for-Service
Systems in Disbursing Specific Processed End Products
Produced Under State Processing Agreements
(SY 1987-88)

End Product ¹	Number of States with Processing Contract ²	Fee-for- Service Rebates Discounts		
		(Percent of States) ³		
Pizza	26	19%	65%	54%
Bread and Rolls	26	15	58	69
Beef Patties	25	100	0	0
Chicken Nuggets	20	75	0	25
Salad Dressing	19	0	63	37
Turkey Roast/Breast	12	17	58	34
Mayonnaise	13	77	15	15
Beef Steak	11	91	18	9
Ice Cream/Ice Milk	9	0	89	44
Chicken Patties	8	100	12	0
Turkey Bologna	8	100	25	0
Fruit Tarts/Turnovers	8	50	25	25
Burritos/Empanadas	7	86	0	43
Pork Patties	6	100	0	0
Cookies	6	0	100	100
Meatballs	6	83	17	0
Turkey Ham	5	100	0	40
Breaded Chicken Parts	5	80	0	40
Cold Cuts, Unspecified	5	100	40	0
Turkey Hotdogs	5	20	40	40
Sausage, Unspecified	4	100	25	25
Beef Nuggets	4	100	0	0
Beef Products, Unspecified	3	100	0	0
Turkey Pastrami	3	100	0	0
Milkshakes	3	0	67	100
Chicken Fried Steak	3	100	0	0
Cheese	3	0	100	0
Crackers	3	0	100	67
Puddings	3	0	0	100

¹ Includes all end products that were identified by more than 2 States.

² Reflects the number of States that reported a processing contract for each end product.

³ Percentages reflect States that have a processing contract for each end product. Percentages across all three systems may total more than 100 percent for any given product, since States may use more than one system for the same product.

Data Source: State Agency Survey.

Exhibit ET-V.5

Proportion of State Agencies that Serve as
Distributors for End-Products
Manufactured Under State Processing Agreements
(SY 1987-88)

Serve as distributor for products produced under state processing contracts?	Number/Percent of States	
	(n)	(%)
Yes	22	58%
No	16	42

Based on N = 38 (Number of States with processing contracts).

Data Source: State Agency Survey.

Exhibit ET-V.6

End Products Distributed by SDAs with
State Processing Agreements
(SY 1987-88)

End-Product	Number/Percent of States	
	(n)	(%)
Turkey Products	9	24%
Salad Dressing	6	16
Hamburger Patties	5	13
Beef Products (Unspec.)	5	13
Chicken Products (Unspec.)	5	13
Chicken Nuggets	5	13
Mayonnaise	4	10
Chicken Patties	2	5
Pork/Pork Products	2	5
Pizza/Pizza Products	2	5
Turnovers	2	5
BBQ Beef Patties	1	3
Breaded Beef Steak	1	3
Chicken Fried Steak	1	3
Empanados/Burritos	1	3
Beef Roasts	1	3
Pepperoni	1	3
Bologna	1	3
Fish & Cheese Products	1	3
Ice Cream	1	3
Pie Fillings	1	3
Cherries (Unspec.)	1	3
Fruit Juices	1	3
Macaroni	1	3

Based on N = 38 (Number of States with processing contracts.)

Data Source: State Agency Survey.

Exhibit ET-V.7

Use of Competitive Bids in Selecting Processors for
State Processing Contracts
(SY 1987-88)

Use competitive bids	Number/Percent of States	
	(n)	(%)
Yes	12	32%
Sometimes	2	5
No	24	63

Based on N = 38 (Number of States with processing contracts).

Data Source: State Agency Survey.

Exhibit ET-V.8

Methods Used to Solicit Bids
for State Processing Contracts
(SY 1987-88)

Are bidding opportunities advertised or are bids invited?	Number/Percent of States	
	(n)	(%)
All Publicly Advertised	7	50%
All by Invitation	6	43
Most Publicly Advertised/ a Few by Invitation	1	7

Based on N = 14 (States with processing contracts that sometimes or always solicit bids for processing).

Data Source: State Agency Survey.

Exhibit ET-V.9

Methods Used by State Agencies
to Monitor Processing Activities
(SY 1987-88)

Monitoring Method	Number/Percent of States	
	(n)	(%)
Audit processors' records	28	73%
Analyze products	24	63
Monitor physical plant	19	50
Review monthly processor reports	8	21
Performance/processor review	4	10
SFA feedback	3	8
Taste product	2	5
Other	1	3

Based on N = 38 (Number of States with processing contracts.)

Data Source: State Agency Survey.

Exhibit ET-V.10

Focus of Product Analysis Performed
in Monitoring Commodity Processing Activities
(SY 1987-88)

Focus of Product Analysis	Number/Percent of States	
	(n)	(%)
Both nutritional and commodity content	11	46%
Commodity content only	8	34
Nutritional content only	1	4
Missing	4	16

Based on N = 24 (States with processing contracts that use product analysis in monitoring processors' performance).

Data Source: State Agency Survey.

Exhibit ET-V.11

Problems Encountered During
Monitoring of Processing Activities
(SY 1987-88)

Problem	Number/Percent of States	
	(n)	(%)
None	10	42%
Product did not meet commodity content specifications	5	21
Incorrect rebate or discount value credited	4	17
Guaranteed minimum yield not achieved	2	8
Product not of acceptable quality	2	8
Missing	1	4

Based on N = 24 (States with processing contracts that use product analysis in monitoring processors' performance).

Column does not total to 100 percent due to rounding.

Data Source: State Agency Survey.

Exhibit ET-V.12

Number of SFAs with Locally-Initiated
Processing Agreements in States Where
Level of Local Processing Activity
Has Changed Since SY 1985-86
(SY 1987-88)

State	Number of SFAs in SY 1987-88	Number of SFAs in SY 1985-86 ¹	Difference
Illinois	29	6	+23
Indiana	110	41	+69
Maine	12	0	+12
Michigan	70	150	-80
Missouri	25	29	-4
Montana	2	8	-6
North Carolina	50	5	+45
North Dakota	40	15	+25
Washington	4	63	-59
Wisconsin	110	32	+78

¹Data source: A Study of the State Commodity Distribution Systems, USDA, Food and Nutrition Service, 1988.

Data Source: State Agency Survey.

Exhibit ET-V.13

Changes Made in Commodity Warehousing and
Distribution Systems Since SY 1985-86
(SY 1987-88)

Response	<u>Number/Percent of States</u>	
	(n)	(%)
No Changes	36	82%
Changes Made	6	14
Don't Know/Missing	2	4

Based on N = 44 (States that completed the State Agency Survey).

Data Source: State Agency Survey.

Exhibit ET-V.14

Specific Changes in Warehousing or
Distribution Systems Reported by States
That Have Made Major Changes
Since SY 1985-86
(SY 1987-88)

State	Response
Nebraska	Currently distributing fee-for-service processed foods through warehouse system.
New Mexico	Full week delivery cycle.
North Carolina	Eliminate car-side delivery; begin direct delivery to SFAs.
Ohio	Pilot delivery system begun in SY1987-88. Prior to this pilot program state had no delivery system - warehouse pickup only.
Rhode Island	Built new warehouse. This has eliminated outside storage costs.
Vermont	Changed from a vendor that was primarily a commercial distributor and warehouse to a public warehouse facility that is not selling products. Previous vendor was not able to handle USDA products efficiently.

Data Source: State Agency Survey

Exhibit ET-V.15

State Monitoring of
SFA Commodity Inventories
(SY 1987-88)

	Number/Percent of States	
	(n)	(%)
Do you monitor the type and amount of commodities held in inventory by SFAs in your State? ¹		
Yes	41	93%
No	2	5
Missing	1	2
How often do you monitor commodity inventories held by SFAs? ²		
Once a year	15	37
Twice a year	10	24
Three times a year	1	2
Four times a year	5	12
Ten times a year	1	2
Twelve times a year	4	10
Sixteen times a year	1	2
Once every two years	2	5
Occasionally/Seldom	2	5
How often are SFAs required to reconcile paper inventories with physical counts? ²		
Once a year	15	37
Once a month	9	22
Twice a year	5	12
Once each quarter	3	7
Ten times a year	3	7
Three times a year	1	2
Never	4	10
Don't Know	1	2
Is the inventory information provided by SFAs used to determine the type and amount of commodities allocated during the year? ²		
Yes	22	54
No	19	47

¹Based on N = 44 (States that completed the State Agency Survey).

²Based on N = 41 (Number of States that monitor the type and amount of commodities held in inventory by SFAs)

Exhibit ET-V.16

Participation in the Food Donation Program
(SY 1988-89)

	Participation in the Food Donation Program ^{1, 2}		Total SFAs (Weighted)
	Yes	No	
TOTAL SAMPLE	90%	10%	14,259
Type of SFA			
Public	92	8	11,275
Private	82	18	2,984
Participation in SBP			
NSLP and SBP	94	6	3,849
NSLP only	89	11	10,410
SFA Size			
Small (1-999)	92	8	5,479
Medium (1000-4999)	94	6	4,890
Large (5000+)	95	5	1,743
SFA Poverty Level			
High (60% or more F&R)	97	3	1,934
Low (0-59% F&R)	92	8	10,178

¹Estimates of non-participating SFAs include 13 SFAs in the State of Kansas (weighted value approximately 800 SFAs). Overall percentages are virtually identical when these SFAs are excluded.

²Chi-square tests of independence were performed for each subgroup. No significant relationships were found.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-V.17

Proportion of SFAs that Communicate Their
 Preferences for Forms in Which
 USDA-Donated Commodities are Received
 (SY 1988-89)

<u>Communicate Preferences Regarding Commodity Forms</u>			
	Yes	No	Total SFAs (Weighted)
TOTAL SAMPLE	84%	16%	12,847
Type of SFA			
Public	89	11	10,404
Private	64	36	2,443
Participation in SBP			
NSLP and SBP	90	10	3,623
NSLP only	82	18	9,224
SFA Size			
Small (1-999)	79	21	5,016
Medium (1000-4999)	85	15	4,604
Large (5000+)	89	11	1,657
SFA Poverty Level			
High (60% or more F&R)	88	12	1,870
Low (0-59% F&R)	82	18	9,408

Ns and percentages reflect SFAs that participate in the Food Donation Program.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-V.18

Methods Used to Voice Preferences for
Forms in Which USDA-Donated Commodities are Received
(SY 1988-89)

Method	Type of SFA		Total Sample
	Public	Private	
Place order/accept or reject items	47%	69%	50%
State surveys	36	17	34
Meetings/committees	23	11	21
Talk with someone at SDA	2	1	2
Other	3	1	3
Total SFAs (Weighted)	9,252	1,571	10,823

Ns and percentages reflect SFAs that participate in the FDP and use some mechanism to voice preferences regarding the forms in which commodities are received.

Columns total more than 100 percent because SFAs may utilize more than one method.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-V.19

Receipt of Off-Condition USDA Commodities
(SY 1987-88)

<u>Receipt of Off-Condition USDA Commodities</u>			
	Yes	No	Total SFAs (Weighted)
TOTAL SAMPLE	17%	83%	12,847
Type of SFA			
Public	18	82	10,404
Private	12	88	2,443
Participation in SBP			
NSLP and SBP	17	83	3,623
NSLP only	18	82	9,224
SFA Size			
Small (1-999)	13	87	5,016
Medium (1000-4999)	19	81	4,604
Large (5000+)	27	73	1,657
SFA Poverty Level			
High (60% or more F&R)	7	93	1,870
Low (0-59% F&R)	20	80	9,408

Ns and percentages reflect SFAs that participate in the Food Donation Program.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-V.20

Problems Encountered With Off-Condition
 USDA Commodities
 (SY 1987-88)

Type of Commodity/ Specific Problem	Percent of SFAs Reporting Problems	Total SFAs (Weighted)
Dairy	33%	692
Spoiled	19	
Frozen	5	
Other/no reason	9	
Fruits	23	485
Spoiled	15	
Damaged container	5	
Other/no reason	3	
Poultry	17	366
Spoiled	11	
Defrosted	1	
Frozen	2	
Other/no reason	4	
Vegetables	15	294
Spoiled	3	
Damaged container	3	
Frozen	6	
Other/no reason	2	
Grains and Oils	14	300
Spoiled	3	
Damaged container	3	
Bugs	6	
Other/no reason	2	

Ns and percentages reflect SFAs that participate in the FDP and reported receiving off-condition commodities in SY 1987-88.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-V.21

Number of Cases of Off-Condition
Commodities Received by SFAs
(SY 1987-88)

Type of Commodity/ Number of Cases	Percent of SFAs	Total SFAs (Weighted)
Dairy		692
1-6 cases	41%	
7-9 cases	10	
20-60 cases	35	
150 or more cases	1	
missing	14	
Fruits		485
1-6 cases	45%	
7-19 cases	17	
20-60 cases	22	
100 or more cases	2	
missing	14	
Poultry		366
1-2 cases	43%	
3-19 cases	15	
20-65 cases	27	
100 or more cases	5	
missing	11	
Vegetables		294
1 case	75%	
2-25 cases	9	
55-99 cases	15	
Grains and Oils		300
1-3 cases	42%	
4-9 cases	13	
10-75 cases	28	
100 or more cases	3	
missing	15	

Ns and percentages for each type of commodity reflect SFAs that reported receiving off-condition commodities.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-V.22

Formal Complaints Filed Regarding
Off-Condition USDA Commodities
(SY 1987-88)

Formal Complaint Filed	Percent of SFAs
No	78%
Yes, written only	6
Yes, verbal only	11
Yes, written and verbal	5
Total SFAs (Weighted)	12,847

Ns and percentages reflect SFAs that participate in the Food Donation Program.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-V.23

Number of Formal Complaints Filed
Regarding Off-Condition USDA Commodities
(SY 1987-88)

	Total Number of Complaints	Mean	S.D.	Total SFAs (Weighted)
Written Complaints	2,452	1.7	1.05	1,405
Verbal Complaints	5,630	2.8	5.1	2,045

Ns and associated values reflect SFAs that participate in the FDP and filed a formal complaint regarding commodities in SY 1987-88.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-V.24

Donated Commodities Used in
Locally-Initiated Processing Agreements
(SY 1988-89)

Donated Commodity	Percent of SFAs Using Commodity
Cheese	34%
Beef	30
Flour	29
Chicken, all forms	28
Ground beef	27
Pork	25
Turkey, all forms	13
Ground pork	12
Oil	5
Tomato paste	2
Non-fat dried milk	3
Butter	3
Shortening	2
Milk	2
Tomatoes	2
Peanut butter	2
Potatoes	1
Cherries	1
Raisins	1
Total SFAs (Weighted)	2,422

Ns and percentages reflect SFAs that participate in the FDP, use processed end-products made with donated USDA commodities, and have locally-initiated agreements with food processors.

Column totals more than 100 percent because responses are independent of one another.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-V.25

Processed End-Products Made From USDA Commodities
Under Locally-Initiated Processing Agreements
(SY 1988-89)

End Product	Percent of SFAs Using End-Product
Hamburger patties	40%
Meatballs	7
Steak/Salisbury steak	10
Steak-ums	6
Other beef products	9
Pizza	34
Chicken nuggets	22
Chicken patties	6
Other chicken products	10
Turkey ham	4
Turkey nuggets	4
Turkey cold cuts	3
Other turkey products	5
Pork patties	6
Pork roll	4
Other pork products	6
Sausage/pepperoni	15
Bologna	3
Sausage links	3
Sausage patties	6
Bread	12
Ice cream	5
Mayonnaise	4
Cookies	3
Pretzels	3
Other grain items	5
Total SFAs (Weighted)	2,422

N and percentages reflect SFAs that participate in the FDP, use processed end-products made with donated USDA commodities, and have locally-initiated processing agreements.

Column totals more than 100 percent because SFAs may have more than one processing contract.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-V.26

Use of Competitive Bids in Selecting
Processors for Local Processing Contracts
(SY 1988-89)

Do you use competitive bid procedures in selecting food processors?	Percent of SFAs
Yes	39%
No	61
Total SFAs (Weighted)	2,422

N and percentages reflect SFAs that participate in the FDP, use processed end-products made with donated USDA commodities, and have locally-initiated agreements with food processors.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-V.27

Methods Used to Solicit Bids for
Local Processing Contracts
(SY 1988-89)

	Percent of SFAs
<hr/>	
<u>Procedures Used to Obtain Bids</u>	
Written response to formal offering	62%
Require that processors submit samples of products for taste-testing	15
Obtain telephone quotes	10
Purchasing cooperative arranges processing agreements	7
Management company arranges processing agreements	4
Other	2
 <u>Terms Requested</u>	
Both gross and net price	37
Net price	28
Gross price	19
Missing	17
Total SFAs (Weighted)	936

N and percentages reflect those SFAs that participate in the FDP, utilize locally-initiated processing agreements, and use bid procedures to select food processors.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-V.28

Methods Used by Local Agencies
to Monitor Processing Activities
(SY 1988-89)

Method	Percent of SFAs
Trust the processor	44%
Use "government-approved" processors	30
Do nutritional analysis	17
Weigh the product	11
Other	6
Total SFAs (Weighted)	2,422

N and percentages reflect SFAs that participate in the FDP, use processed end-products made with donated USDA commodities, and have locally-initiated processing agreements.

Column totals more than 100 percent because SFAs could report multiple monitoring methods.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-V.29

SFA Satisfaction With Quality of Processed
End-Products Purchased Through State
or National Processing Agreements
(SY 1988-89)

Satisfaction with the
quality of end-products
received through State or
National processing agreements

Percent of SFAs

Satisfied	98%
Not Satisfied	2
Total SFAs (Weighted)	5,561

Ns and percentages reflect SFAs that participate in the FDP and purchase processed end-products through State or National processing agreements.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-VI.1

Factors Influencing SFAs' Decisions to Participate in the
School Breakfast Program
(SY 1988-89)

Factor	Percent of SFAs
Nutritional needs of students	43%
Poverty of students	30
Well-fed children learn better	28
Expect high participation	10
School board interest	7
Severe-need rate	6
Mandated by state	6
Parental interest	4
Extended day/bus arrives early	3
Federal subsidy	3
Total SFAs (Weighted)	3,849

N and percentages reflect SFAs that participate in the School Breakfast Program.

Column totals more than 100 percent because respondents could provide more than one reason for participation.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-VI.2

Reasons that Some Schools in Participating SFAs
Do Not Offer the School Breakfast Program
(SY 1988-89)

Reason	Percent of SFAs
Problem opening early	27%
Expect low participation	21
No transportation	17
No school board interest	14
Too few low-income students	10
No food preparation/service facilities	8
Believe breakfast should be at home	8
Believe subsidy won't cover cost	5
Currently testing program in some schools	4
No parental interest	1
Other	8
Total SFAs (Weighted)	1,874

N and percentages reflect SFAs that participate in the SBP but have at least one school that does not offer the program.

Column totals more than 100 percent because respondents could provide more than one reason for non-participation.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-VI.3

SFA Manager's Report of Receipt of SBP Severe-Need Reimbursement
(SY 1988-89)

	All Eligible Schools Receive Severe-Need Reimbursement		Total SFAs (Weighted)
	Yes	No	
TOTAL SAMPLE	74%	26%	1,736
Type of SFA			
Public	72	27	1,596
Private	92	8	141
SFA Size			
Small (1-999)	95	5	448
Medium (1000-4999)	67	33	701
Large (5000+)	68	32	624
SFA Poverty Level			
High (60% or more F&R)	80	20	837
Low (0-59% F&R)	70	30	937

Ns and percentages reflect SFAs that participate in the School Breakfast Program and, based on the SFA Manager's report, have one or more schools that are eligible to receive severe-need reimbursement.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-VI.4

Reasons that Schools Eligible for SBP
Severe-Need Rate Fail to Claim the
Additional Reimbursement
(SY 1988-89)

Reason	Percent of SFAs
Didn't submit application	65%
Don't Know	25
Other	10
Total SFAs (Weighted)	432

N and percentages reflect SFAs that participate in the SBP and have schools that are potentially eligible for the severe-need rate that do not currently receive it.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-VI.5

Characteristics of Typical Breakfasts
Served in the SBP
(SY 1988-89)

Characteristics	Percent of SFAs
Availability of Specific Foods	
Milk	100
Chocolate Milk	35
Iron-Fortified Cold Cereal	91
Other Cold Cereal	21
Hot Cereal	41
Citrus Juice	99
Non-Citrus Juice	45
Bread and Rolls	89
Doughnuts, Pastries	9
Pancakes and Waffles	59
Bacon, Ham, Sausage	58
Eggs	58
Cheese	60
Peanut Butter	46
Hot Food(s) Offered	
Yes	86%
No	14
Choice of Items	
Yes	55
No	45
Total SFAs (Weighted)	3,849

N and percentages reflect SFAs that participate in the School Breakfast Program.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-VI.6

Provision of Enhanced Breakfasts in
SFAs with Severe-Need Schools
(SY 1988-89)

	Percent of SFAs
<hr/>	
Are enhanced meals provided in the School Breakfast Program? ¹	
Yes	76%
No	24
Total SFAs (Weighted)	1,736
Are enhanced breakfasts provided in all schools serving breakfast or only in those qualifying for severe-need payments? ²	
All schools, some of which are not severe-need schools	31
All schools, but all schools are severe-need schools	11
Severe-need only schools	7
Missing	51
Total SFAs (Weighted)	1,273

¹N and percentages reflect SFAs that participate in the School Breakfast Program and have at least one school that is eligible for the severe-need reimbursement rate.

²N and percentages reflect SFAs that participate in the School Breakfast Program, have at least one school that is eligible for the severe-need rate, and serve enhanced breakfasts.

Data Source: Year One SFA Manager Mail Survey

Exhibit ET-VII.1

Methods Used to Monitor Meal Components Included
in Meals Selected by Students
(SY 1988-89)

	Percent of Schools
<hr/>	
Does anyone check to see that each child has taken the required items that comprise a reimbursable meal?	
Yes	99%
No	1
Total Schools (Weighted) ¹	115,237
What is done if a child comes to the point of service (cashier) and does not have a sufficient number of meal components?	
Child is told to go back and pick up missing item(s)	86%
Meal is treated as an a la carte sale and child must pay for it	6
Count it as a reimbursable meal	3
Other	5
Total Schools (Weighted) ²	114,085

¹N and percentages reflect all schools included in school-level sample.

²N and percentages reflect schools where someone does check to ensure that meals contain the appropriate number of meal components.

Data Source: Year One SFA Manager Mail Survey -- data reported for one randomly selected school.

Exhibit ET-VII.2

Methods Used to Monitor Meal Counts
in Individual Schools
(SY 1988-89)

	Percent of Schools	
<hr/>		
Does anyone at the school check to ensure that the number of meals claimed is accurate?		
Yes	94%	
No	6	
Total Schools (Weighted) ¹		115,237
If so, how often is the monitoring/ checking done?		
Daily	70%	
Monthly	15	
Weekly	11	
Annually	2	
Other	2	
Total Schools (Weighted) ²		108,322

¹N and percentages reflect all schools in the school-level sample.

²N and percentages reflect schools that check the accuracy of meal counts.

Data Source: Year One SFA Manager Mail Survey -- data reported for one randomly selected school.

Exhibit ET-VII.3

SFA Monitoring of Individual Schools'
Meal Reimbursement Claims
(SY 1988-89)

<u>SFA Monitoring of Individual Schools</u>			
	Yes	No	Total SFAs (Weighted)
TOTAL SAMPLE	85%	15%	14,259
Type of SFA			
Public	86	14	11,275
Private	81	19	2,984
Participation in SBP			
NSLP and SBP	90	10	3,849
NSLP only	83	17	10,410
SFA Size			
Small (1-999)	82	18	5,479
Medium (1000-4999)	87	13	4,890
Large (5000+)	92	8	1,743
SFA Poverty Level			
High (60% or more F&R)	84	16	1,934
Low (0-59% F&R)	86	14	10,178

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-VII.4

Methods Used by SFAs to Monitor
Individual Schools'
Meal Reimbursement Claims
(SY 1988-89)

Monitoring Method	Percent of SFAs
Check meal counts against approved applications	96%
Check meal counts against attendance records	72
Conduct on-site visit	67
Total SFAs (Weighted) ¹	11,803

¹N and percentages reflect SFAs that monitor meal reimbursement claims submitted by individual schools.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-VIII.1

Number of SFAs in Each State That
Utilize a Food Service Management Company
(SY 1988-89)

State	Number of SFAs with FSMC
AL	0
AR	0
AZ	12
CA	24
CO	4
CT	36
DE	0
FL	3
IA	0
ID	1
IL	72
IN	6
KS	5
KY	0
LA	0
MA	29
MD	missing
ME	2
MI	55
MO	31
MT	1
NE	0
NC	0
ND	1
NV	0
NH	3
NJ	198
NM	1
NY	136
OH	31
OK	2
PA	106
RI	4
SC	0
SD	9
TN	1
TX	27
UT	0
VA	0
VT	6
WA	21
WI	10
WV	2
WY	0
TOTAL	839

Based on n=44 (States that completed the State Agency Survey).
Data Source: State Agency Survey.

Exhibit ET-VIII.2

Distribution of Food Service Functions
in SFAs Using Food Service
Management Companies
(SY 1988-89)

Food Service Function and Responsible Party	Percent of SFAs
Fd Purch: Select Vendors	
School District	4%
Management Company	92
Shared	4
Fd Purch: Determine Orders	
School District	1
Management Company	90
Shared	8
Fd Purch: Set Delivery Dates	
School District	1
Management Company	97
Shared	2
Prepare Menus	
School District	7
Management Company	90
Shared	4
Donated Commod: Determine Orders	
School District	7
Management Company	81
Shared	13
Donated Commod: Arrg/Provd Delivery	
School District	7
Management Company	84
Shared	9
Donated Commod: Storage/Transportation	
School District	9
Management Company	74
Shared	17
Donated Commod: Arrge/Provd Processing	
School District	5
Management Company	88
Shared	7
Provide A La Carte Service	
School District	13
Management Company	80
Shared	7

(continued)

N and percentages reflect SFAs that utilized a food service management company in SY 1988-89.

Components may not add to 100 percent due to rounding.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-VIII.2

(continued)

Food Service Function and Responsible Party	Percent of SFAs
Prepare Breakfast ¹	
School District	16
Management Company	78
Shared	6
Serve Breakfast ¹	
School District	15
Management Company	79
Shared	5
Prepare Lunch	
School District	19
Management Company	69
Shared	12
Serve Lunch	
School District	23
Management Company	69
Shared	7
Sell Lunch Tickets	
School District	25
Management Company	51
Shared	24
Cafeteria Clean-Up	
School District	28
Management Company	15
Shared	57
Provide Equipment for Food Preparation	
School District	47
Management Company	16
Shared	37
Accounting and Financial Records	
School District	8
Management Company	63
Shared	29
Prepare Reimbursement Claims	
School District	17
Management Company	39
Shared	43
Total SFAs (Weighted)	1,011

Unless otherwise noted, percentages reflect SFAs that utilized a food service management company in SY 1988-89.

¹Percentages reflect SFAs that participate in the SBP and utilized a food service management company in SY 1988-89, (n=115).

Components may not total 100 percent due to rounding.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-IX.1

Foods Purchased Through Purchasing Cooperatives
(SY 1988-89)

Food Item	Percent of SFAs
Canned Foods	80%
Staple Foods	73
Frozen Foods	71
Bread	51
Fresh Meats	47
Dairy	47
Ice Cream	36
Fresh Produce	29
Snacks	29
Complete Meals	18
Total SFAs (Weighted)	3,166

N and percentages reflect SFAs that participate in purchasing cooperatives. Column totals more than 100 percent because each food item represents an independent question.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-IX.2

Origin of Food Orders by SFA Size
(SY 1988-89)

Food Item/Origin of Order	SFA Size			All SFAs
	Small	Medium	Large	(Percent)
(Percent of SFAs)				
Dairy				
District	36%	42%	34%	41%
School	64	58	66	59
Bread				
District	37	64	50	47
School	63	36	50	53
Fresh Produce				
District	40	81	76	57
School	60	19	24	43
Canned Foods				
District	42	88	89	64
School	58	12	11	36
Frozen Foods				
District	42	88	89	63
School	58	12	11	37
Fresh Meats				
District	42	87	91	63
School	58	13	9	57
Snacks				
District	37	72	60	49
School	54	24	33	43
Missing	9	4	7	0
Ice Cream				
District	34	67	51	46
School	59	28	41	47
Missing	6	5	8	7
Staple Foods				
District	42	89	89	64
School	58	11	11	36
Total SFAs (Weighted)				14,259

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-IX.3

State Reports of SFA Utilization of Vended Meals
(SY 1988-89)

Number of SFAs Using Vended Meals	Number/Percent of States	
	(n)	(%)
0	22	50%
2	1	2
3	3	7
4	3	7
5	2	5
6	1	2
7	2	5
39	1	2
63	1	2
107	1	2
224	1	2
Missing	6	14
Total	44	100%

Based on n = 44 (States that completed the State Agency Survey).

Data Source: State Agency Survey.

Exhibit ET-IX.4

Agencies Responsible for Producing Vended Meals
(SY 1988-89)

Agency	Number/Percent of States	
	(n)	(%)
Another SFA	15	94%
Commercial Vendor	13	81
Hospital	5	31
Senior Center	1	6
Child Care Center	1	6
Other	1	6
Missing	2	12

Based on n = 16 (Number of States in which one or more SFAs used vended meals).

Columns total more than 100 percent because more than one type of agency may provide vended meals within a State.

Data Source: State Agency Survey.

Exhibit ET-IX.5

Use of SFA Food Service Facilities
for Alternative Programs
(SY 1988-89)

	Percent of SFAs
Do you use the food service facilities in your district for programs other than the NSLP and SBP?	
Yes	28%
No	72
Total SFAs (Weighted)	14,259

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-IX.6

Alternative Programs Served by SFA Food Service Facilities
(SY 1988-89)

	Percent of SFAs
Used for:	
Elderly feeding sites	15%
NSLP/SBP for other SFAs or schools	12
Day care centers participating in CACFP	11
Summer Food Service Program	10
Other day care centers (non-CACFP)	7
Other programs	51
Total SFAs (Weighted)	3,971

N and percentages reflect SFAs that use their food service facilities for alternative programs.

Column totals more than 100 percent because SFAs could serve more than one alternative program.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-IX.7

Perceived Impacts of Provision of
Food Service for Alternative Programs
(SY 1988-89)

Has the provision of meals to these programs
had any impact on your traditional meal service?
If so, what have the impacts been? Percent of SFAs

No impact	91%
Yes, more efficient use of facilities	4
Yes, reduces meal cost	2
Yes, enhanced public relations	3
Yes, more efficient use of staff	2
Total SFAs (Weighted)	3,971

N and percentages reflect SFAs that use their food service facilities for alternative programs.

Column totals more than 100 percent because SFA managers could report more than one impact.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-IX.8

Availability of Foods
 Inside the Cafeteria from A La Carte Sales,
 Vending Machines or Snack Bars in
 Elementary and Middle/Secondary Schools
 (SY 1988-89)

Food Item	Elementary Schools ¹	Middle/Secondary Schools ²
Milk	98%	98%
Fruit/Juice	84	90
Main Dish/Sandwich	76	88
Baked Goods	69	86
Salads	58	87
Frozen Desserts	64	81
Chips/Snacks	30	57
Soft Drinks	5	13
Candy/Gum	1	7
Total SFAs (Weighted)	5,640	8,944

¹Ns and percentages reflect SFAs that had at least one elementary school and had a la carte items, vending machines, or snack bars available.

²Ns and percentages reflect SFAs that had at least one middle/ secondary school and had a la carte items, vending machines or snack bars available.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-IX.9

Availability of Specific Foods
Outside the Cafeteria from
Vending Machines or Snack Bars in
Elementary and Middle/Secondary Schools
(SY 1988-89)

Food Item	Elementary Schools ¹	Middle/Secondary Schools ²
Milk	18%	13%
Fruit/Juice	10	23
Main Dish/Sandwich	1	9
Baked Goods	7	18
Salads	5	3
Frozen Desserts	4	11
Chips/Snacks	6	33
Soft Drinks	7	46
Candy/Gum	5	26
Total SFAs (Weighted)	5,640	8,944

¹Ns and percentages reflect SFAs that had at least one elementary school and had a la carte items, vending machines or snack bars available.

²Ns and percentages for middle/secondary schools reflect SFAs that had at least one middle/secondary school and had a la carte items, vending machines, or snack bars available.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-IX.10

Off-Campus Meal Privileges in Elementary Schools
(SY 1988-89)

	<u>Off-Campus Meal Privileges</u>		Total SFAs (Weighted)
	Yes	No	
TOTAL SAMPLE	20%	80%	13,497
Type of SFA			
Public	19	81	10,869
Private	24	76	2,628
Participation in SBP			
NSLP and SBP	20	80	3,789
NSLP only	20	80	9,709
SFA Size			
Small (1-999)	25	75	4,929
Medium (1,000-4,999)	15	85	4,756
Large (5,000+)	19	81	1,700
SFA Poverty Level			
High (60% or more F&R)	16	84	1,862
Low (0-59% F&R)	21	79	9,514

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-IX.11

Off-Campus Meal Privileges in
Middle/Secondary Schools
(SY 1988-89)

	<u>Off-Campus Meal Privileges</u>		Total SFAs (Weighted)
	Yes	No	
TOTAL SAMPLE	30%	70%	10,621
Type of SFA			
Public	30	70	10,196
Private	9	91	425
Participation in SBP			
NSLP and SBP	31	69	3,356
NSLP only	29	71	7,265
SFA Size			
Small (1-999)	34	68	2,639
Medium (1,000-4,999)	28	72	4,808
Large (5,000+)	34	66	1,715
SFA Poverty Level			
High (60% or more F&R)	31	69	1,388
Low (0-59% F&R)	31	69	7,774

Ns and percentages reflect SFAs with at least one middle/secondary school.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-IX.12

Availability of Multiple NSLP Entrees in
Elementary Schools
(SY 1988-89)

	<u>Availability of Multiple NSLP Entrees</u>		Total Weighted N
	Yes	No	
TOTAL SAMPLE	40%	60%	13,497
Type of SFA			
Public	42	58	10,869
Private	32	68	2,628
Participation in SBP			
NSLP and SBP	43	57	3,789
NSLP only	39	61	9,709
SFA Size			
Small (1-999)	28	72	4,929
Medium (1,000-4,999)	48	52	4,756
Large (5,000+)	47	53	1,700
SFA Poverty Level			
High (60% or more F&R)	23	77	1,862
Very Low (0-59.9% F&R)	42	58	9,514

Ns and percentages reflect SFAs that have at least one elementary school.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-IX.13

Availability of Multiple NSLP Entrees in
Middle/Secondary Schools
(SY 1988-89)

<u>Availability of Multiple NSLP Entrees</u>			
	Yes	No	Total Weighted N
TOTAL SAMPLE	75%	25%	10,621
Type of SFA			
Public	77	23	10,196
Private	44	56	425
Participation in SBP			
NSLP and SBP	82	18	3,356
NSLP only	72	28	7,265
SFA Size			
Small (1-999)	45	55	2,639
(Medium (1,000-4,999)	85	15	4,808
Large (5,000+)	95	5	1,715
SFA Poverty Level			
High (60% or more F&R)	70	30	1,388
Very Low (0-59.9% F&R)	77	23	7,774

Ns and percentages reflect SFAs that have at least one middle/secondary school.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-IX.14

Use of Computer Programs for Nutritional Analysis
(SY 1988-89)

	Use of Computer Programs for Nutritional Analysis		Total Weighted N
	Yes	No	
TOTAL SAMPLE	9%	91%	9,612
Type of SFA			
Public	11	89	7,854
Private	2	98	1,757
Participation in SBP			
NSLP and SBP	12	88	2,682
NSLP only	8	92	6,930
SFA Size			
Small (1-999)	5	95	3,622
Medium (1000-4999)	11	89	3,471
Large (5000+)	19	81	1,046
SFA Poverty Level			
High (60% or more F&R)	7	93	1,198
Low (0-59% F&R)	10	90	6,942

Ns and percentages reflect SFAs that perform a nutritional analysis of their menus.

Data Source: Year One SFA Manager Telephone Survey.

Exhibit ET-X.1

Recipients of Training and Technical Assistance Provided by State Agencies
(SY 1988-89)

Topic	States Providing (n)	Recipients of Training			
		SFA Managers	SFA Cafeteria Workers	Administrative Staff	School Administrators
Food Purchasing	40	72%	40%	56%	60%
Food Sanitation and Safety	42	90	83	71	64
Menu Planning	44	82	68	64	48
Food Preparation	41	73	71	51	34
Contract Procedures	31	52	23	52	77
Recordkeeping	44	82	59	82	77
Merchandising	43	77	65	60	53
Regulations and Procedures	44	84	73	86	82
Use of Commodities	38	79	76	71	58

Ns and percentages for each topic reflect states that provided some form of training or technical assistance in each area.

Data Source: State Agency Survey.

Exhibit ET-X.2

Types of Training and Technical Assistance
Received by SFAs
(SY 1988-89)

Topic Area	Percent of SFAs
Food Purchasing	28%
Food Sanitation and Safety	57
Menu Planning	40
Food Preparation	41
Contract Procedures	13
Recordkeeping	36
Merchandising	37
Regulations and Procedures	50
Use of Commodities	38

Percentages reflect SFAs that received some training or technical assistance in SY 1988-89.

Data Source: Year One SFA Manager Telephone Survey

Exhibit ET-X.3

Recipients of Training and Technical
Assistance Provided to SFAs
(SY 1988-89)

Topic Area/Recipients	Percent of SFAs
Food Purchasing	
Managers	42%
Cafeteria Workers	18
School Administrators	11
Managers and Administrators	17
Mgrs/Admin & Cafeteria Workers	11
Other	1
Food Sanitation & Safety	
Managers	38
Cafeteria Workers	35
School Administrators	4
Manager and Administrators	1
Mgrs/Admin & Cafeteria Workers	21
Other	1
Menu Planning	
Managers	37
Cafeteria Workers	31
School Administrators	5
Managers and Administrators	12
Mgrs/Admin & Cafeteria Workers	16
Food Preparation	
Managers	39
Cafeteria Workers	38
School Administrators	2
Managers and Administrators	2
Mgrs/Admin & Cafeteria Workers	20
Contract Procedures	
Managers	27
Cafeteria Workers	15
School Administrators	50
Mgrs/Admin & Cafeteria Workers	8
Other	1
Recordkeeping	
Managers	40
Cafeteria Workers	14
School Administrators	20
Managers and Administrators	1
Mgrs/Admin & Cafeteria Workers	26

Exhibit ET-X.3
(continued)

Topic Area/Recipients	Percent of SFAs
Merchandising	
Managers	42%
Cafeteria Workers	19
School Administrators	15
Managers and Administrators	1
Mgrs/Admin & Cafeteria Workers	23
Regulations & Procedures	
Managers	37
Cafeteria Workers	15
School Administrators	26
Managers and Administrators	1
Mgrs/Admin & Cafeteria Workers	21
Use of Commodities	
Managers	36
Cafeteria Workers	24
School Administrators	11
Mgrs/Admin & Cafeteria Workers	27
Other	2

Percentages for each topic area reflect SFAs that received training and technical assistance in that area during SY 1988-89.

Data Source: Year One SFA Manager Telephone Survey

Exhibit ET-X.4

Providers of Training and Technical Assistance
 Received by SFAs
 (SY 1988-1989)

Topic Area/Provider	Percent of SFAs
Food Purchasing	
State Agency	66%
College or University	8
State Agency and Other Agency	15
Other	11
Food Sanitation & Safety	
State Agency	58
College or University	18
State Agency and Other Agency	7
Other	17
Menu Planning	
State Agency	76
College or University	5
State Agency and Other Agency	10
Other	9
Food Preparation	
State Agency	64
College or University	12
State Agency and Other Agency	9
Other	14
Contract Procedures	
State Agency	57
College or University	3
State Agency and Other Agency	29
Other	10
Recordkeeping	
State Agency	78
College or University	3
State Agency and Other Agency	11
Other	9
Merchandising	
State Agency	64
College or University	8
State Agency and Other Agency	11
Other	18

-continued-

Exhibit ET-X.4
(continued)

Topic Area/Provider	Percent of SFAs
<hr/>	
Regulations & Procedures	
State Agency	86%
College or University	1
State Agency and Other Agency	8
Other	5
Use of Commodities	
State Agency	80
College or University	2
State Agency and Other Agency	10
Other	8

Percentages for each topic area reflect SFAs that received training or technical assistance in that area during SY 1988-89.

Data Source: Year One SFA Manager Telephone Survey

PART 4: APPENDICES

- Appendix A: Advisory Panel Members, Focus Group Participants and EIAC Members
- Appendix B: Sample Design
- Appendix C: State Agency Survey Questionnaire
- Appendix D: Year One SFA Manager Telephone Survey Questionnaire
- Appendix E: Year One SFA Manager Mail Survey Questionnaire
- Appendix F: Nonresponse Analysis for Year One SFA Manager Telephone Survey
- Appendix G: Nonresponse Analysis for Year One SFA Manager Mail Survey
- Appendix H: Sample Weighting Methodology
- Appendix I: Methodology for Estimating Lunch Equivalents

APPENDIX A

**ADVISORY PANEL MEMBERS,
FOCUS GROUP PARTICIPANTS
AND EAC MEMBERS**

Advisory Panel Members

Susan Gilroy
Food Service Director
San Diego City Schools, California

Jack Fowler
Sampling Statistician
University of Massachusetts

Jack Nelson
State Distributing Agent
Richmond, Virginia

John Raftery
Child Nutrition Director
Quincy, Massachusetts

Lynn Daft
Abel, Daft and Earley
Alexandria, Virginia

Focus Group Participants

Regis Balaban
Cleveland Public Schools, Ohio

June Bichard
Skowhegan Public Schools, Maine

Jack Hastings
Dade County Public Schools, Florida

Darrell Gray
20th Century Food Products, California

Bobby Coley
Jefferson County Schools, Alabama

Susan Gilroy
San Diego City Schools, California

Elaine Agee
Milwaukee Public Schools, Wisconsin

Stanley Smith
Baltimore County Schools, Maryland

Kathryn Brophy
Boston Public Schools, Massachusetts

Paul Fees
Arlington Public Schools, Virginia

EIAC Members

Karol Richardson, Illinois

John Raftery, Massachusetts

Tom Freeman, Oklahoma

Carol Axtman, South Dakota

Kathy Kuser, New Jersey

APPENDIX B
SAMPLE DESIGN

SAMPLE DESIGN

The sample design for the SFA Manager Surveys of the Child Nutrition Program Operations Study consists of a panel sample of SFAs. That is, repeated measurements are taken on an initially-selected sample of SFAs. The sample has been designed to yield national cross-sectional estimates for each of three years, as well as cross-sectional estimates for key domains (subgroups) of the SFA population. The sample has also been designed to yield year-to-year estimates of program change.

POTENTIAL RESPONDENT UNIVERSE

The total number of SFAs participating in the NSLP and SBP in the 48 contiguous States and the District of Columbia is approximately 18,000. Roughly 14,000 of these are public SFAs, while the remaining 4,000 are private SFAs. Private SFAs may be individual schools, with most being Catholic schools, or administrative jurisdictions such as Catholic Archdioceses. Data from other studies showed that about 24 percent of all SFAs offer both the NSLP and SBP, while approximately 76 percent offer only the NSLP. High poverty SFAs, those with over 60 percent of their enrollment approved for free or reduced-price meals, accounted for about 13 percent of the total. It should be noted that the data from this project yield somewhat different estimates of the size of these subgroups.

THE SAMPLING FRAME

SFAs were sampled from the 80 PSU national master sample used for the previously conducted School Lunch Income Verification Study.^{1/} Clustering the SFA sample within an existing national master sample of PSUs offered three major advantages. First, a complete frame of all SFAs in the U.S. did not have to be constructed. Second, the burden placed on any

^{1/}St.Pierre, R., M. Puma, J. Layzer, and M. Battaglia, Study to Assess the Implementation and Impact of Current School Lunch Income Verification Requirements, Final Report. Cambridge, MA: Abt Associates Inc., 1989.

individual State was reduced because they only had to provide a list of SFAs located within certain geographic areas. Third, on-site data collection could be conducted at a lower cost because between SFA travel time and distance is reduced when compared to an unclustered national sample of SFAs.

Each Primary Sampling Unit (PSU) in the master sampling frame consists of a Metropolitan Statistical Area (MSA), a grouping of non-MSA contiguous counties, or a single non-MSA county. The 80 PSU master sample consists of 20 large self-representing MSAs that were included in the sample with certainty. The remaining 60 PSUs (the non-self-representing MSAs or county groupings) were selected from strata formed using data from the 1980 Census. Two PSUs were selected from each of 30 strata using probability proportional to size (pps) sampling based on the 1980 Census population count of each PSU. The distribution of the 80 PSUs is shown below; a complete list of the counties that comprise the PSUs is provided in Exhibit B.1.

	Census Region				
	North- east	Mid West	South	West	Total
Self-representing MSAs	7	5	6	2	20
Non-self-representing MSAs	8	9	13	9	39
Non-self-representing county groupings	<u>3</u>	<u>6</u>	<u>9</u>	<u>3</u>	<u>21</u>
	18	20	28	14	80

To construct the sampling frame of SFAs it was first necessary to obtain from States current information (from SY 1986-87) on all SFAs located in the 80 PSUs. This included names and addresses of school districts; names and telephone numbers of school food service directors or appropriate contact persons; one or more measures of program size such as enrollment (or average daily attendance), number of free, reduced-price and paid lunches and breakfasts and/or number of free and reduced-price approved applicants; SFA type (public versus private), program participation (NSLP only versus NSLP and SBP), and poverty level of the SFA.

Exhibit B.1

80 PSU Master Sample

PSU #	STATE	COUNTY	STRATUM	PROBABILITY OF SELECTION
1	New York	Bronx	A111	1.000
		New York	A111	1.000
2	New York	Kings	A112	1.000
		Queens	A112	1.000
		Richmond	A112	1.000
3	New York	Nassau	A113	1.000
		Orange	A113	1.000
		Putnam	A113	1.000
		Rockland	A113	1.000
		Suffolk	A113	1.000
		Westchester	A113	1.000
4	New Jersey	Burlington	A120	1.000
		Camden	A120	1.000
		Gloucester	A120	1.000
	Pennsylvania	Bucks	A120	1.000
		Chester	A120	1.000
		Delaware	A120	1.000
		Montgomery	A120	1.000
		Philadelphia	A120	1.000
5	Massachusetts	Essex	A130	1.000
		Middlesex	A130	1.000
		Norfolk	A130	1.000
		Suffolk	A130	1.000
6	Pennsylvania	Allegheny	A140	1.000
		Beaver	A140	1.000
		Washington	A140	1.000
		Westmoreland	A140	1.000
7	New Jersey	Essex	A150	1.000
		Morris	A150	1.000
		Somerset	A150	1.000
		Union	A150	1.000
8	Illinois	Cook	A210	1.000
		DuPage	A210	1.000
		Kane	A210	1.000
		Lake	A210	1.000
		McHenry	A210	1.000
		Will	A210	1.000

Exhibit B.1
(continued)

PSU #	STATE	COUNTY	STRATUM	PROBABILITY OF SELECTION	
9	Michigan	Lapeer	A220	1.000	
		Livingston	A220	1.000	
		Macomb	A220	1.000	
		Oakland	A220	1.000	
		St. Clair	A220	1.000	
		Wayne	A220	1.000	
10	Illinois	Clinton	A230	1.000	
		Madison	A230	1.000	
		Monroe	A230	1.000	
		St. Clair	A230	1.000	
	Missouri	Franklin	A230	1.000	
		Jefferson	A230	1.000	
		St. Charles	A230	1.000	
		St. Louis	A230	1.000	
		St. Louis C	A230	1.000	
11	Ohio	Cuyahoga	A240	1.000	
		Geauga	A240	1.000	
		Lake	A240	1.000	
		Medina	A240	1.000	
12	Minnesota	Anoka	A250	1.000	
		Carver	A250	1.000	
		Chisago	A250	1.000	
		Dakota	A250	1.000	
		Hennepin	A250	1.000	
		Ramsey	A250	1.000	
		Scott	A250	1.000	
		Washington	A250	1.000	
		Wright	A250	1.000	
	Wisconsin	St. Croix	A250	1.000	
	13	D.C.	District of Col.	A310	1.000
Maryland			Charles	A310	1.000
			Montgomery	A310	1.000
Virginia		Prince George	A310	1.000	
		Arlington	A310	1.000	
		Fairfax	A310	1.000	
		Loudoun	A310	1.000	
		Prince William	A310	1.000	
		Alexandria	A310	1.000	
		Fairfax CI	A310	1.000	
		Falls Church	A310	1.000	
		Manassas	A310	1.000	
		Manassas P	A310	1.000	

Exhibit B.1
(continued)

PSU #	STATE	COUNTY	STRATUM	PROBABILITY OF SELECTION
14	Texas	Collin	A320	1.000
		Dallas	A320	1.000
		Denton	A320	1.000
		Ellis	A320	1.000
		Hood	A320	1.000
		Johnson	A320	1.000
		Kaufman	A320	1.000
		Parker	A320	1.000
		Rockwall	A320	1.000
		Tarrant	A320	1.000
		Wise	A320	1.000
15	Georgia	Cherokee	A330	1.000
		Clayton	A330	1.000
		Cobb	A330	1.000
		DeKalb	A330	1.000
		Douglas	A330	1.000
		Fayette	A330	1.000
		Forsyth	A330	1.000
		Fulton	A330	1.000
		Gwinnett	A330	1.000
		Henry	A330	1.000
		Newton	A330	1.000
		Paulding	A330	1.000
		Rockdale	A330	1.000
Walton	A330	1.000		
16	Florida	Dade	A340	1.000
		Palm Beach	A340	1.000
17	Maryland	Anne Arundel	A350	1.000
		Baltimore	A350	1.000
		Carroll	A350	1.000
		Harford	A350	1.000
		Howard	A350	1.000
		Baltimore	A350	1.000
18	Texas	Brazoria	A360	1.000
		Fort Bend	A360	1.000
		Harris	A360	1.000
		Liberty	A360	1.000
		Montgomery	A360	1.000
		Waller	A360	1.000
19	California	Los Angeles	A410	1.000

Exhibit B.1
(continued)

PSU #	STATE	COUNTY	STRATUM	PROBABILITY OF SELECTION
20	California	Alameda	A420	1.000
		Contra CCS	A420	1.000
		Marin	A420	1.000
		San Francisco	A420	1.000
		San Mateo	A420	1.000
21	New Jersey	Bergen	B110	1.9566
		Passaic	B110	1.9566
22	New Jersey	Atlantic	B110	13.3037
23	Oklahoma	Canadian	B330	2.9701
		Cleveland	B330	2.9701
		McClain	B330	2.9701
		Oklahoma	B330	2.9701
		Pottawatomie	B330	2.9701
24	New Jersey	Middlesex	B120	6.4733
25	New Jersey	Monmouth	B120	5.1855
26	Connecticut	Hartford	B130	4.3033
		Tolland	B130	4.3033
27	New York	Madison	B140	5.9439
		Ononcaga	B140	5.9439
		Oswego	B140	5.9439
28	New Jersey Pennsylvania	Warren	B150	6.0174
		Carbon	B150	6.0174
		Lehigh	B150	6.0174
		Northampton	B150	6.0174
29	New York	Albany	B150	3.2056
		Montgomery	B150	3.2056
		Rensselaer	B150	3.2056
		Saratoga	B150	3.2056
		Schenectady	B150	3.2056
30	Kansas	Johnson	B210	2.0140
		Wayndotte	B210	2.0140
	Missouri	Cass	B210	2.0140
		Clay	B210	2.0140
		Jackson	B210	2.0140
		Platte	B210	2.0140
		Ray	B210	2.0140

Exhibit B.1
(continued)

PSU #	STATE	COUNTY	STRATUM	PROBABILITY OF SELECTION
31	Ohio	Greene	B210	3.2351
		Miami	B210	3.2351
		Montgomery	B210	3.2351
		Preble	B210	3.2351
32	Wisconsin	Milwaukee	B220	1.9310
		Ozaukee	B220	1.9310
		Washington	B220	1.9310
		Waukesha	B220	1.9310
33	Michigan Ohio	Monroe	B230	3.3720
		Fulton	B230	3.3720
		Lucas	B230	3.3720
		Ottawa	B230	3.3720
		Wood	B230	3.3720
34	Wisconsin	Sheboygan	B230	26.6424
35	Indiana	Lake	B250	4.1218
		Porter	B250	4.1218
36	Michigan	Clinton	B240	5.4655
		Eaton	B240	5.4655
		Ingham	B240	5.4655
		Ionia	B240	5.4655
37	Wisconsin	Dane	B240	8.0778
38	Michigan	Kent	B260	4.4038
		Ottawa	B260	4.4038
39	Texas	Brazos	B310	26.7298
40	North Carolina	Cumberland	B320	10.4216
41	Florida	Alachua	B320	16.7739
42	North Carolina Virginia	Currituck	B350	3.1024
		Chesapeake	B350	3.1024
		Norfolk CI	B350	3.1024
		Portsmouth	B350	3.1024
		Suffolk	B350	3.1024
		Virginia B	B350	3.1024

Exhibit B.1
(continued)

PSU #	STATE	COUNTY	STRATUM	PROBABILITY OF SELECTION
43	Florida	Baker	B350	3.4094
		Clay	B350	3.4094
		Duval	B350	3.4094
		Nassau	B350	3.4094
		St. Johns	B350	3.4094
44	Alabama	Jefferson	B370	2.9389
		St. Clair	B370	2.9389
		Shelby	B370	2.9389
		Walker	B370	2.9389
45	Arkansas	Pulaski	B340	6.3970
		Saline	B340	6.3970
46	Alabama	Etowah	B340	24.5582
47	Georgia	Catoosa	B360	5.9614
		Dade	B360	5.9614
		Walker	B360	5.9614
	Tennessee	Hamilton	B360	5.9614
		Marion	B360	5.9614
		Sequatchie	B360	5.9614
48	Texas	Callahan	B380	18.3753
		Jones	B380	18.3753
		Taylor	B380	18.3753
49	Alabama	Colbert	B390	18.8077
		Lauderdale	B390	18.8077
50	Florida	Manatee	B390	16.9953
51	Colorado	Adams	B410	1.6389
		Arapahoe	B410	1.6389
		Boulder	B410	1.6389
		Denver	B410	1.6389
		Douglas	B410	1.6389
		Gilpin	B410	1.6389
		Jefferson	B410	1.6389
52	Washington	King	B410	1.6003
		Snohomish	B410	1.6003
53	Washington	Kitsap	B430	18.6235
54	California	Orange	B420	1.4268

Exhibit B.1
(continued)

PSU #	STATE	COUNTY	STRATUM	PROBABILITY OF SELECTION
55	California	Placer	W440	2.6233
		Sacramento	B440	2.6233
		Yolo	B440	2.6233
56	Arizona	Pima	B440	5.0972
57	Washington	Spokane	B450	7.8223
58	California	Santa Clara	B450	2.0198
59	Arizona	Maricopa	B460	1.6948
60	New Jersey Pennsylvania	Sussex	C110	17.0298
		Pike	C110	17.0298
61	New York	Clinton	C110	28.2582
62	Pennsylvania	Fayette	C120	11.2249
		Greene	C120	11.2249
63	Indiana	Benton	C210	92.3215
		Carroll	C210	92.3215
64	Iowa	Des Moines	C220	42.7229
		Henry	C220	42.7229
65	Kansas	Reno	C220	43.0546
66	Indiana	Fayette	C230	27.3541
		Henry	C230	27.3541
		Rush	C230	27.3541
67	Ohio	Shelby	C230	63.8565
68	Illinois	Gallatin	C240	77.2965
		Saline	C240	77.2965
69	Texas	Culberson	C310	97.6781
		Hudspeth	C310	97.6781
		Jeff Davis	C310	97.6781
		Presidio	C310	97.6781
		Reeves	C310	97.6781
70	South Carolina	Darlington	C350	22.2620
		Dillon	C350	22.2620
		Marlboro	C350	22.2620

Exhibit B.1
(continued)

PSU #	STATE	COUNTY	STRATUM	PROBABILITY OF SELECTION
71	Georgia	Colquitt	C350	52.3366
		Worth	C350	52.3366
72	Georgia	Camden	C320	22.7834
		Charlton	C320	22.7834
		Glynn	C320	22.7834
		Liberty	C320	22.7834
		McIntosh	C320	22.7834
73	Georgia	Whitfield	C320	42.0278
74	Virginia	Madison	C360	43.6657
		Page	C360	43.6657
		Rappahannock	C360	43.6657
		Shenandoah	C360	43.6657
75	South Carolina	Calhoun	C330	29.2788
		Orangeburg	C330	29.2788
76	Virginia	Henry	C340	36.8740
		Martinsville	C340	36.8740
77	Kentucky	Marion	C340	55.7800
		Taylor	C340	55.7800
		Washington	C340	55.7800
78	Colorado	Chaffee	C410	45.4955
		Fremont	C410	45.4955
		Gunnison	C410	45.4955
79	Wyoming	Sweetwater	C410	43.5062
		Uinta	C410	43.5062
80	Washington	Mason	C420	76.0231

Although States may collect and maintain this information, prior experience in collecting these data has shown that assembling it often imposes a substantial burden. Typically, district names and addresses are on a separate file or list from that containing enrollment and average daily participation, which often uses only a multi-digit I.D. in lieu of a district name. A third file or list may contain food service director names and telephone numbers. A small number of States are highly computerized and have an integrated file; for these, generating a single list with all the necessary information presents few problems. Conversely, a few States still have only paper files for all the information; in these States, staff must compile the needed information by hand. Consequently, a flexible strategy was used that offered States several different approaches to gathering the data needed for sampling and asked them to select the one that best fit their individual situation.

SFA SAMPLE SELECTION METHODS

Once the sample of PSUs was selected and information collected on all of the SFAs within each of the PSUs, a sample of 1,740 SFAs was drawn. This step in the sampling process was, however, complicated by the fact that SFAs vary greatly in terms of size, from less than 100 to well over 100,000 students. To illustrate the problem, consider the calculation of a weighted SFA mean estimate for some characteristic of interest:

$$\bar{y}_{\text{WEIGHTED}} = \frac{\sum w_i y_i}{\sum w_i}$$

where the weights, w_i , are equal, for example, to the number of NSLP participants in the i -th SFA. Ignoring the PSUs for a moment, if n SFAs are selected with equal probability, $f=n/N$, from all N SFAs in the U.S. the resulting weighted estimate may have a large sampling variance because the largest sample SFAs will dominate the estimate and its variance.

Kish demonstrates that in this situation of wide variation in the size of sample units it is better to select the n sample SFAs with probability

proportional to size (pps) sampling.^{1/} In this situation, if total NSLP eligibles^{2/} are used as the measure of size, the weighted sum

$$\frac{\sum y_i}{n},$$

is a simple and efficient estimator, because the product of the sampling weight of each SFA and its value of total NSLP eligibles is a constant for all SFAs.

To expand this process to reflect the actual two-stage (PSUs ---> SFAs) cluster sample design used in this study, each of the 80 PSUs was assigned a PSUWT_{hi} value equal to the reciprocal of the probability of selection of the i-th PSU in the h-th PSU stratum. (For self-representing PSUs PSUWT = 1.0). Therefore, the estimated total number of NSLP eligibles in the U.S. equals:

$$\sum_h \sum_i \sum_j \text{PSUWT}_{hi} \times Z_{hij}$$

where Z_{hij} is the number of NSLP eligibles in the j-th SFA in the i-th PSU in the h-th PSU stratum. Further, for a pps sample of 1,740 SFAs the selection probability of an SFA is equal to:

$$\frac{1740 Z_{hij}}{\sum_h \sum_i \sum_j \text{PSUWT}_{hi} \times Z_{hij}} = \frac{1740 Z_{hij}}{\text{Estimated number of NSLP eligibles in the U.S.}}$$

Typically, in pps sampling the largest SFAs are selected with certainty. For the purpose of this study, therefore, the largest SFAs were defined as those with a selection probability of 0.75 or greater (greater than or equal to 4,150 approved applicants). A total of 112 large SFAs in the 80 PSUs met this criterion. Removing these 112 SFAs from the 80 PSU sampling frame left 3,581 SFAs that

^{1/}Kish, L. Statistical Design for Research, John Wiley & Sons, New York, 1987.

^{2/}For the purposes of this sample design NSLP eligibles are defined as the number of approved free and reduced-price applications.

accounted for a total of 5,412,291 approved applicants. Thus the desired selection probability of the remaining 1,628 (1740-112) SFAs was equal to:

$$\frac{(1,628) (Z_{hi j})}{5,412,291}$$

Because the 1,628 SFAs were actually selected from within the 80 PSUs, the first and second stage selection probabilities (i.e., $f_1 \times f_2 = f$ must be taken into account):

$$\frac{POP_{hi}}{\sum_i POP_{hi}} \times f_2 = \frac{(1,628) (Z_{hi j})}{5,412,291}$$

first-stage selection probability	x	second-stage selection probability	=	overall selection probability
-----------------------------------------	---	------------------------------------------	---	-------------------------------------

In the above equation POP_{hi} is the 1980 Census population of the i-th PSU in the h-th stratum. For certainty PSUs the first stage selection probability equals 1.0.

The second stage selection probability required to satisfy the overall selection probability is:

$$\frac{(1,628) (\sum_i POP_{hi}) (Z_{hi j})}{(POP_{hi}) (5,412,291)}$$

The quantity $\sum_i POP_{hi} / POP_{hi}$ is equal to $PSUWT_{hi}$.

Substituting this yields:

$$\frac{(1,628) (PSUWT_{hi}) (Z_{hi j})}{5,412,291} = (.000301) PSUWT_{hi} Z_{hi j}$$

where the quantity .00031 $PSUWT_{hi}$ is a constant for all SFAs in the i-th PSU. Consequently, the within-SFA selection probability for the j-th SFA is proportional to its $Z_{hi j}$ value. This is attained when two conditions are met:

- (1) The allocation of the 1,628 sample SFAs to the 80 PSUs is based on

$$n_{hi} = \frac{(1,628) (\sum_j \text{PSUWT}_{hi}) (Z_{hi})}{5,412,291},$$

which means that PSUs are allocated sample SFAs in proportion to the total weighted number of approved NSLP applicants.

- (2) Within PSUs, the n_{hi} sample SFAs are selected with probability proportional to size sampling from the N_{hi} SFAs in the PSU.

When these two conditions are met, a two-stage sample of SFAs, where the overall selection probability of the SFA is proportional to its Z_{hij} value, is realized. This is the case because the above two conditions imply that the selection probability of an SFA within a PSU equals:

$$\begin{aligned} n_{hi} Z_{hij} &= \frac{(1,628) (\text{PSUWT}_{hi}) (Z_{hi})}{5,412,291} Z_{hij} \\ \sum_j Z_{hij} & \quad \sum_j Z_{hij} \\ &= \frac{(1,628) (\text{PSUWT}_{hi}) (Z_{hij})}{5,412,291}, \end{aligned}$$

which equals the required second-stage (f_2) selection probability determined above.

SAMPLE SIZES AND EXPECTED LEVEL OF PRECISION

As previously discussed, the study was designed to provide overall national estimates as well as reliable estimates for six domains of the population:

- Type of SFA
 - 1) Public
 - 2) Private
- Type of Participation
 - 3) NSLP and SBP
 - 4) NSLP Only
- Poverty Status
 - 5) High-Poverty 1/
 - 6) Low-Poverty

Because the study will provide cross-sectional estimates for all three years, required sample sizes for each domain were computed on the basis of sample size of 1,139 responding SFAs, i.e., the number of SFAs expected to provide complete data for all three years of the study.

The determination of the required sample size of SFAs to meet a desired precision level must take into account the sample clustering. That is, to meet a desired level of precision for national estimates, a larger sample size of SFAs is needed when compared to a simple random sample of SFAs. This so called "design effect" can be estimated by first determining the sample size required to meet a desired margin of error, d, for an estimate, P, assuming simple random sampling:

$$n_{SRS} = \frac{(1.96)^2 P (100-P)}{d^2},$$

where d = 1.96s.e.(P) is the desired margin of error and n_{SRS} is the simple random sample size. Because the sample design is actually a two-stage cluster sample (PSUs ---> SFAs), the sample size needed to meet the desired margin of error can be estimated from the expression for the sampling variance of P:

1/High-poverty SFAs were defined as those that served 60 percent or more of their lunches free or at a reduced price in SY 1987-88.

$$\text{Var}(P) = \frac{P(100-P)}{m \bar{n}} [1 + \rho_1 (\bar{n} - 1)]$$

where

- m = the number of sample PSUs,
- \bar{n} = the average number of sample SFAs per sample PSU, and
- ρ_1 = the measure of homogeneity of SFAs within PSUs for the characteristic of interest.

For high-poverty SFAs a margin of error for P=50 percent of plus or minus 5.5 percent was specified. Using m=80 PSUs and a typical ρ_1 value of 0.01 based on past studies, the required sample size of high-poverty SFAs is equal to:

$$\begin{aligned} \bar{n} &= \frac{1 - \rho_1}{\frac{\text{Var}(P) \times 80}{P(100-P)} - \rho_1} \\ &= \frac{1 - .01}{\frac{7.87 \times 80}{2500} - .01} \end{aligned}$$

= 3.93 SFAs per PSU, or a total of 314 high poverty SFAs

The low-poverty domain was allocated the balance of the 1,139 SFAs for a total sample of 825 responding low-poverty SFAs. For this domain a margin of error of about plus or minus 3.6 percent would result from this sample after three years.

The second SFA stratifier is type of SFA (public or private). With only 2 percent of NSLP eligibles in private SFAs it did not make sense to allocate a substantial portion of the total sample to this domain. At Year Three, an allocation of 169 responding private SFAs versus 970 responding public SFAs yields margins of error of plus or minus 7.6 percent and plus or minus 3.3 percent, respectively.

By stratifying the SFA sample on the basis of type and poverty level, and given the allocation to these

two stratifiers, it was not necessary to stratify the sample by participation in the SBP. Given the above stratifications it is expected that a sample of 420 responding SFAs that participate in the SBP and 720 responding SFAs that only participate in the NSLP will be attained at Year Three. This yields a Year Three margin of error of plus or minus 4.9 percent and plus or minus 3.7 percent, respectively.

Exhibit B.2 shows the expected number of responding SFAs and margins of error for each of the three years. For the overall sample of 1,139 responding SFAs in Year Three, a margin of error around plus or minus 3.1 percent is expected. For Year Two and Year One, a margin of error of plus or minus 3.0 percent and plus or minus 2.8 percent, respectively, are expected. Cross-sectional estimates for Years One and Two have smaller expected margins of error due to the larger number of responding SFAs.

In addition to providing precise annual estimates, data from this study are also intended to provide estimates of program change over time. The sampling variance of the difference, P_{t-1} , between two years for a panel sample can be written as:

$$\text{Var}(P_t - P_{t-1}) = \text{Var}(P_t) + \text{Var}(P_{t-1}) - 2 \text{Cov}(P_t, P_{t-1}).$$

With a panel sample $n_t = n_{t-1} = n$, and generally $\text{Var}(P_t) = \text{Var}(P_{t-1}) = \text{Var}(P)$ leading to a simplified form of the above equation:

$$2 \text{Var}(P) [1-R],$$

where R represents the correlation between the two years for the variable of interest. In this equation $2 \text{Var}(P)$ equals the variance of the difference for two independent samples of size n, and thus $[1-R]$ measures the reduction in the variance from using a panel sample.

Exhibit B.3 shows the expected sampling variance of the difference between P_t and P_{t-1} for each of the six domains of interest and the entire sample for various values of R. For variables that exhibit a high positive correlation between two years, substantial reductions in the sampling variance of the difference will be realized. These would be variables that exhibit a high degree of stability over

Exhibit B.2

Expected Sample Sizes of Responding SFAs
by Year and Type of SFA

	Public	Private	NSLP Only	NSLP and SBP	Low Poverty	High Poverty
Initial Sample Size (n=1740)	1,450	290	1,085	655	1,230	510
Number of Year One Respondents (n=1407)	1,198	209	827	580	1,019	388
Expected Margin of Error	<u>+3.0%</u>	<u>+6.8%</u>	<u>+3.4%</u>	<u>+4.4%</u>	<u>+3.2%</u>	<u>+5.1%</u>
Number of Year Two Respondents (n=1266)	1,078	188	800	466	917	349
Expected Margin of Error	<u>+3.2%</u>	<u>+7.2%</u>	<u>+3.6%</u>	<u>+4.6%</u>	<u>+3.4%</u>	<u>+5.3%</u>
Number of Year Three Respondents (n=1139)	970	169	720	420	825	314
Expected Margin of Error	<u>+3.3%</u>	<u>+7.6%</u>	<u>+3.7%</u>	<u>+4.9%</u>	<u>+3.6%</u>	<u>+5.5%</u>

Exhibit B.3

Expected Sampling Variances for the
Difference Between Two Panel
Estimates for the Domains of Interest¹

Domain	R Value						
	0.00	0.20	0.40	0.60	0.80	0.90	0.95
Total Three-Year sample (n=1,139 SFAs)	5.0%	4.0%	3.0%	2.0%	1.0%	0.5%	0.2%
High-Poverty SFAs (n=314)	16.4%	13.1%	9.8%	6.6%	3.3%	1.6%	0.8%
Low-Poverty SFAs (n=825)	6.6%	5.3%	4.0%	2.7%	1.3%	0.7%	0.3%
Public SFAs (n=970)	5.7%	4.6%	3.4%	2.3%	1.1%	0.6%	0.3%
Private SFAs (n=169)	29.9%	23.9%	17.9%	12.0%	6.0%	3.0%	1.5%
NSLP Only SFAs (n=720)	7.5%	6.0%	4.5%	3.0%	1.5%	0.7%	0.4%
NSLP & SBP SFAs (n=420)	12.4%	9.9%	7.4%	5.0%	2.5%	1.2%	0.6%

¹The variance calculations assume P=50 percent and the expected number of SFAs with data for all three years of the study.

time. When the correlation begins to approach zero the gains from using a panel sample diminish.

ALLOCATING THE SAMPLE TO THE STRATA

The sample design contains four strata per PSU (2 SFA type domains x 2 poverty-level domains) and in classical stratified sampling each stratum is assigned a stratum sample size. The allocation derived in the previous section is, however, not at the stratum level but at the marginal level of each stratifier:

Private SFAs	290
Public SFAs	<u>1,450</u>
	1,740
High-poverty SFAs	510
Low-poverty	<u>1,230</u>
	1,740

Before a sample of SFAs was drawn from each of the four strata the marginal sample sizes were iteratively allocated to the four strata using the method of iterative proportional fitting (IPF) (Bishop, Fienberg and Holland).^{1/} This algorithm was applied to all SFAs in our sampling frame to determine the sample size for each of the four strata. The pps allocation and sample selection method was then applied to each stratum separately to select the required sample of SFAs from the 80 PSUs.

SCHOOL-LEVEL SAMPLING

One of the research issues for the Year One survey survey has to do with the ways in which meals are claimed for reimbursement. Because the individual school rather than the SFA is the most appropriate observational unit for this analysis, a three-stage sample of schools (PSUs, SFAs, and schools) was needed.

For the purposes of this study, one school was randomly selected from each sample SFA. Although this does not provide a sample that can be used to make statements about any given SFA, it does allow nationally generalizable statements to be made. SFA

^{1/}Bishop, Y., Fienberg, S., and Holland, P. Discrete Multivariate Analysis, The MIT Press, Cambridge, 1975.

directors first determined whether the SFA contained only elementary schools, only secondary schools, or both elementary and secondary schools. Elementary schools were defined as those that have either a Kindergarten or first grade. SFAs with both types of schools were instructed on which school type to randomly sample. A simplified set of random numbers was provided to the SFA director, along with clear instructions on how to select one school. This approach was utilized in order to provide separate estimates for secondary and elementary schools to ensure that a sufficient sample of secondary schools was obtained. For the largest SFAs, a sampling assistant from Abt Associates contacted the SFA to provide direct instructions and assistance in selecting the sample school.

APPENDIX C
STATE AGENCY SURVEY

CHILD NUTRITION PROGRAM OPERATIONS STUDY

STATE TELEPHONE SURVEY
VERSION A = COMBINED
SDA AND CN

THIS STUDY IS SPONSORED BY THE U.S. DEPARTMENT
OF AGRICULTURE'S FOOD AND NUTRITION SERVICE

State name: _____

Respondent: Name/Title _____

Telephone # _____

Program Responsibilities _____

Year of survey 19__

RECORD OF CONTACTS

Contact

#	Interviewer	Date	Time	Status	Notes
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

OMB CLEARANCE NUMBER:

EXPIRATION DATE:

State Interview

COMMODITY PROCESSING

1. Did your state agency enter into contracts for processing or repackaging donated commodities in School Year 1987-88?

Yes.....1
No (SKIP TO Q.6).....2

1a. What commodities were processed or repackaged under these agreements? We are interested in the 10 commodities that were largest in terms of USDA-assigned value.

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

1b. What types of end-products were produced from these commodities? Do school districts receive these end-products under a rebate or a discount system? For which, if any, do SFAs have to pay a fee for repackaging?

<u>End-Products</u>	<u>Rebate</u>	<u>Discount</u>	<u>Fee for Service</u>
_____	1	2	3
_____	1	2	3
_____	1	2	3
_____	1	2	3
_____	1	2	3
_____	1	2	3
_____	1	2	3
_____	1	2	3
_____	1	2	3
_____	1	2	3
_____	1	2	3
_____	1	2	3

1c. Did your agency serve as distributor for any of the end-products manufactured under these agreements?

Yes.....1
No (SKIP TO Q.2).....2

1c.1 For which end-products?

2. Do you solicit bids for processing?

Yes.....1
Sometimes.....2
No (SKIP TO Q.3).....3

2a. Are these opportunities publicly advertised or are bids invited? (CIRCLE ALL THAT APPLY)

All publicly advertised.....1
Most publicly advertised.....2
A few publicly advertised.....3
All by invitation.....4
Most by invitation.....5
A few by invitation.....6
Other (SPECIFY).....7

3. How do you monitor processing activities?

Monitor physical plant.....1
Analyze product (SKIP TO Q.3b).....2
Audit records.....3
Other (SPECIFY).....4

IF THEY DO NOT MENTION PRODUCT ANALYSIS, ASK:

3a. Do you do any analysis of the end-products of processing agreements?

Yes.....1
No (SKIP TO Q.4).....2

3b. Does this analysis focus on nutritional content or is it carried out to determine that commodity content conforms to the specifications of the processing agreements?

Nutritional content.....1
Commodity content.....2
Both.....3
Other (SPECIFY).....4

3c. What types of problems were uncovered during monitoring of processing activities? What is the extent of the problems? (RECORD VERBATIM)

4. What was the total dollar value of the donated commodities that went into all state processing agreements in School Year 1987-88?

\$ _____

5. Did any SFAs in your state enter into local processing agreements (i.e., arrangements made locally between SFAs and food processors to have USDA donated commodities processed into end products) in School Year 1987-88?

Yes.....1
No (SKIP TO Q.6).....2

5a. Has the number or type of these locally-initiated contracts changed substantially since School Year 1985-86?

Yes.....1
No (SKIP TO Q.6).....2

5b. How many SFAs had local processing agreements in School Year 1987-88?

of SFAs

DISTRIBUTION

6. Have there been major changes in the way you warehouse and distribute commodities over the last two years?

Yes.....1

No (SKIP TO Q.7).....2

6a. What are the major changes?

MONITORING OF COMMODITY INVENTORIES

7. Do you monitor the type and amount of commodities held in inventory by SFAs in your state?

Yes.....1
No (GO TO Q.8).....2

7a. How often do you monitor commodity inventories held by SFAs?

_____/_____
per

7b. How often are SFAs required to reconcile paper inventories with physical counts?

_____/_____
per

7c. Is the inventory information provided by SFAs used to determine the type and amount of commodities allocated during the year?

Yes.....1
No.....2

FOOD SERVICE MANAGEMENT COMPANIES

8. How many SFAs in your State currently use a Food Service Management Company?

_____ number
(IF "0", SKIP TO Q.9)

8a. What does the State require of SFAs beyond current Federal regulations in order to contract for these services?

VENDED MEALS

9. How many SFAs in your State currently contract for vended meals?

number
(IF "0", SKIP TO Q.10)

9a. Who is producing these vended meals?

Another SFA.....1
Commercial vendor.....2
Other (SPECIFY).....3

9b. What does the State require of SFAs in order to contract for these meals?

ALLOCATION OF FEDERAL NSLP FUNDS

10. In your payment process of Federal dollars to SFAs, do you use any criteria other than nationally published per-meal reimbursement rates times the number of reimbursable meals claimed?

Yes.....1
No (GO TO Q.11).....2

10a. What other criteria are used? (RECORD VERBATIM)

STATE SUBSIDIES

11. Did your state provide any cash subsidy to school districts as part of the National School Lunch Program or the School Breakfast Program for the 1986-87 or 1987-88 school years?

- Yes, NSLP only (ASK Q.11a).....1
- Yes, SBP only (ASK Q.11b).....2
- Yes, both (ASK Q.11c).....3
- No.....4

11a. What was the amount of the subsidy for the NSLP in 1986-87 and 1987-88? (RECORD BELOW)

(GO TO Q.11d.)

11b. What was the amount of the subsidy for the SBP in 1986-87 and 1987-88? (RECORD BELOW)

(GO TO Q.11d.)

11c. What was the amount of the subsidy for the NSLP and SBP in 1986-87 and 1987-88? We would like the subsidies separately for the NSLP and SBP if you keep your records that way. If not, please give me the combined subsidy. (RECORD BELOW)

	<u>Cents*</u> <u>per Meal</u>	<u>Total*</u> <u>Amount</u>
1987-88		
NSLP	_____	_____
SBP	_____	_____
Total	_____	_____
1986-87		
NSLP	_____	_____
SBP	_____	_____
Total	_____	_____

11d. How were these cash subsidies calculated?

*INSTRUCTION: If respondent provides some other response, e.g. cents per child, ask if it can be converted to a total dollar amount.

TECHNICAL ASSISTANCE AND TRAINING

We want to find out what kind of training and technical assistance are offered to SFAs in your State. To do this we understand that we will need to get the viewpoint of both the Child Nutrition Director and the Food Distribution Director.

12. In which of the following areas do you provide training or technical assistance to SFAs? **READ LIST FROM MATRIX. CIRCLE YES OR NO FOR EACH CATEGORY. FOR EACH CATEGORY WHERE "YES" IS CIRCLED, ASK:**

12a. Is this assistance or training provided routinely or is it provided on request from SFAs? **RECORD RESPONSES ON MATRIX. FOR EACH RESPONSE WHERE "YES" IS CIRCLED, ASK:**

12b. In what form is this technical assistance provided? Is it **READ RESPONSE CATEGORIES FROM MATRIX. RECORD RESPONSES ON MATRIX. FOR EACH RESPONSE ASK:**

12c. Who receives this training? **RECORD RESPONSES ON MATRIX.**

13. Has the level of technical assistance and training provided by your agency to SFAs increased, decreased or remained the same this year, compared with the last three years?

Increased.....1
Decreased.....2
Remained the same (GO TO END).3

13a. Why has the level of training and technical assistance changed?

	12. <u>Training Provided</u>		12a. <u>Routinely or on Request</u>		12b. <u>Form of Technical Assistance*</u>				12c. <u>Who Participated</u> Managers=1 Cafeteria Staff=2 Central Staff=3 Administrators=4			
	<u>Yes</u>	<u>No</u>	<u>Rou- tinely</u>	<u>On Request</u>	1	2	3	4	1	2	3	4
Food purchasing	1	2	1	2	1	2	3	4	1	2	3	4
Food sanitation/ safety	1	2	1	2	1	2	3	4	1	2	3	4
Menu planning	1	2	1	2	1	2	3	4	1	2	3	4
Food preparation	1	2	1	2	1	2	3	4	1	2	3	4
Contracting	1	2	1	2	1	2	3	4	1	2	3	4
Recordkeeping	1	2	1	2	1	2	3	4	1	2	3	4
Merchandising	1	2	1	2	1	2	3	4	1	2	3	4
Program Regulations and Procedures	1	2	1	2	1	2	3	4	1	2	3	4
Use of commodities	1	2	1	2	1	2	3	4	1	2	3	4
Other (SPECIFY)	1	2	1	2	1	2	3	4	1	2	3	4
_____	1	2	1	2	1	2	3	4	1	2	3	4
_____	1	2	1	2	1	2	3	4	1	2	3	4
_____	1	2	1	2	1	2	3	4	1	2	3	4

*Written materials = 1
 During program reviews = 2
 Formal training/workshops/courses = 3
 Other = 4

That was my last question. Thanks very much for your help. As you may know, we are currently surveying school districts across the nation. The information we obtain from them as well as the information we obtain from interviews with state agencies will be used to prepare a report that will be delivered to FNS this fall. Again, thanks for your time and your help.

APPENDIX D

YEAR ONE SFA MANAGER TELEPHONE SURVEY

SPRING 1989 POPS TELEPHONE SURVEY
AS IMPLEMENTED WITH CATI

CHILD NUTRITION PROGRAM OPERATIONS STUDY

SCHOOL FOOD AUTHORITY
TELEPHONE SURVEY
VERSION A=ALL SFAs

3X5 SFA Label
Containing ID, Year of Survey,
Name and Title of Respondent

RECORD OF CONTACTS

Contact #	Interviewer	Date	Time	Status	Notes

X. INTRODUCTION

Hello, this is (YOUR NAME). I am calling from Abt Associates in Cambridge, Massachusetts. We are doing a study of the National School Lunch Program and other Child Nutrition Programs for the U.S. Department of Agriculture, and we hope that you will be willing to help with this study.

X1. Recently, we sent you a questionnaire and a letter describing the study. The same letter and questionnaire were sent to over 1,700 school districts across the country. Do you remember receiving the letter and questionnaire?

 YES.....1
 NO (SKIP TO Q.X4).....2

X2. Did you already return the questionnaire?

 YES (SKIP TO Q.X6).....1
 NO.....2

X3. Do you still have it?

 YES (SKIP TO Q.X5).....1
 NO (SKIP TO Q.X4A).....2

X4. We will send you another letter and questionnaire, and will call you back in a week or so. Please let me verify the name and address to which they should be sent. **READ FROM SAMPLE SHEET. MAKE ANY CHANGES ON SAMPLE SHEET.**

**TERMINATE AND
ASSIGN STATUS CODE 5**

X4A. We will send you another letter and questionnaire. Please let me verify the name and address to which they should be sent. **READ FROM SAMPLE SHEET. MAKE ANY CHANGES ON SAMPLE SHEET.**

- X5. We hope that you are willing to do two things for this study:
- complete the mail questionnaire and mail it back, and
 - answer some additional questions over the telephone.

SKIP TO Q.X7

X6. Thank you very much for completing the mail survey. In addition to that questionnaire, we have some other questions that can be answered over the telephone.

X7. The questions that I would like to ask you over the telephone are about the child nutrition programs in your school or school district. First, I would like to know whether you maintain information on the child nutrition programs centrally, or whether the schools in your district operate the school lunch program independently and maintain their own records.

CENTRALIZED (SKIP TO Q.X9).....1
 DECENTRALIZED.....2

X8. How many schools operating independent food service programs are in your district?

_____ NUMBER OF SCHOOLS

Even though your schools keep their own records and operate their own school lunch programs, you may be able to answer many of my questions, and so I would like to try and complete this interview with you. If you do not know the answer to any question, just say so. I will have a different member of the study team call you back about how best to collect information for the mail survey.

X9. Is this a good time to discuss the study?

YES (SKIP TO NEXT SECTION)....1
 NO.....2

X10. Schedule call back.

ASSIGN STATUS CODE 4

A. PROGRAM OPERATIONS

First, I have some general questions about the Child Nutrition programs in your school district and the way they are run during the current school year.

Al. Which of the following child nutrition programs does your school district participate in this year? Do you participate in....(READ LIST, CIRCLE RESPONSE FOR EACH ITEM)

	<u>Yes</u>	<u>No</u>
The National School Lunch Program.....	1	2
The Department of Agriculture's School Breakfast Program.....	1	2
The Special Milk Program.....	1	2
The Summer Food Service Program.....	1	2
The Child Care Food Program.....	1	2
The Food Distribution Program, also called the Commodity Donation program.....	1	2

IF THE SFA ANSWERED "NO" TO PARTICIPATION IN SBP, SKIP TO A1(f).

Al(a). **IF THE SCHOOL DISTRICT PARTICIPATES IN THE SCHOOL BREAKFAST PROGRAM ASK:** You said that you participate in the Department of Agriculture's School Breakfast Program. Do all the schools in your district currently participate in the School Breakfast Program, or do only some of the schools participate?

ALL.....1
SOME.....2

Al(b). What was the most important factor that influenced the decision to participate in the School Breakfast Program? (DO NOT READ LIST, CIRCLE ONLY ONE RESPONSE)

Al(c). Were there any other reasons? (DO NOT READ LIST, CIRCLE AS MANY RESPONSES AS ARE GIVEN)

	<u>Alb. Most Important</u>	<u>Alc. Other Reasons</u>
PARENT INTEREST.....	01	1
SCHOOL BOARD INTEREST.....	02	2
THE REGULAR FEDERAL PER MEAL SUBSIDY RATE.....	03	3
THE SEVERE NEED FEDERAL PER MEAL SUBSIDY RATE...	04	4
NUTRITIONAL NEEDS OF THE STUDENTS.....	05	5
POVERTY OF STUDENTS.....	06	6
BELIEF THAT WELL-FED CHILDREN ARE MORE ATTENTIVE AND LEARN BETTER.....	07	7
EXPECTATION OF HIGH PARTICIPATION.....	08	8
STATE LEGISLATION MANDATED IT.....	09	9
OTHER (SPECIFY) _____	96	96

IF "ALL" TO Q.A1a, SKIP TO Q.A2

Al(d). You said that some of your schools do not participate in the School Breakfast Program. What is the main reason that some schools in your district do not participate? (DO NOT READ LIST, CIRCLE ONLY ONE RESPONSE)

Al(e). Are there any other important reasons? (DO NOT READ LIST, CIRCLE AS MANY RESPONSES AS ARE GIVEN)

	<u>Ald. Most Important</u>	<u>Ale. Other Reasons</u>
THE BELIEF THAT FEDERAL SUBSIDY WILL NOT COVER THE COST OF THE PROGRAM.....	01	1
EXPECTATION OF LOW STUDENT PARTICIPATION.....	02	2
THERE ARE TOO FEW LOW-INCOME STUDENTS IN THE SFA.....	03	3
FACILITIES ARE NOT SET UP FOR A SBP.....	04	4
NO PARENT INTEREST HAS BEEN EXPRESSED.....	05	5
NO SCHOOL BOARD INTEREST HAS BEEN EXPRESSED.....	06	6
BELIEF THAT BREAKFAST SHOULD BE PROVIDED IN THE HOME AND NOT BY SCHOOLS.....	07	7
NO TRANSPORTATION AVAILABLE.....	08	8
EARLY OPENING IS A PROBLEM, SUPERVISION IS NOT AVAILABLE.....	09	9
OTHER (SPECIFY) _____		
	96	

Al(f). Does your school district offer any breakfast alternative that is not supported by the U.S. Department of Agriculture?

YES.....1
NO.....2

A2. Now we are switching to a new topic. I'm going to read you a list of food services that may be available in your school cafeterias. For each one, please tell me first if it is available in any of your elementary schools and secondly, if it is available in any of your middle or secondary schools. Are (ITEM) available in your elementary schools? In your secondary schools?

	Type of School			
	Elementary		Middle/Secondary	
	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
A la carte items during breakfast.....	1	2	1	2
A la carte items during lunch.....	1	2	1	2
Vending machines.....	1	2	1	2
Snack bars.....	1	2	1	2
On most days, is there a choice of multiple National School Lunch entrees?	1	2	1	2

IF ALL OF A2 = NO, SKIP A3

A3. Now I'm going to read a list of food items. For each one, please tell me whether it is available to elementary school students on an a la carte basis, from vending machines or at a snack bar, and whether it is available inside the cafeteria or outside the cafeteria.

(Is/Are) (**READ ITEM**) available inside your elementary school cafeterias? (Is it/Are they) available outside the cafeterias?

	<u>Inside Cafeteria</u>		<u>Outside Cafeteria</u>	
	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
Milk.....	1	2	1	2
Main Dish Entrees or Sandwiches.....	1	2	1	2
Salads.....	1	2	1	2
Frozen Desserts.....	1	2	1	2
Fruit/Fruit Juice.....	1	2	1	2
Baked Goods, Cake, Pie, Cookies.....	1	2	1	2
Candy, Gum.....	1	2	1	2
Soft Drinks.....	1	2	1	2
Potato Chips/Snacks.....	1	2	1	2
Other (SPECIFY).....	1	2	1	2

Now I need the same information for your middle/secondary schools. (Is/Are) (**READ ITEM**) available inside your middle/secondary school cafeterias? (Is it/Are they) available outside the cafeterias?

	<u>Inside Cafeteria</u>		<u>Outside Cafeteria</u>	
	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
Milk.....	1	2	1	2
Main Dish Entrees or Sandwiches.....	1	2	1	2
Salads.....	1	2	1	2
Frozen Desserts.....	1	2	1	2
Fruit/Fruit Juice.....	1	2	1	2
Baked Goods, Cake, Pie, Cookies.....	1	2	1	2
Candy, Gum.....	1	2	1	2
Soft Drinks.....	1	2	1	2
Potato Chips/Snacks.....	1	2	1	2
Other (SPECIFY).....	1	2	1	2

A4. During the current school year do you give elementary school students the "offer vs. serve" option for the National School Lunch Program?

YES.....1
NO.....2
NO ELEMENTARY SCHOOLS
IN DISTRICT.....9

A5. During the current school year, are elementary school students allowed off-campus at meal times? Are middle/secondary school students allowed off-campus?

	<u>Yes</u>	<u>No</u>
ELEMENTARY	1	2
MIDDLE/SECONDARY	1	2

A6. Do you do a nutritional analysis of your menus? That is, do you ever determine the nutritional content of the meals you serve?

YES.....1
NO (**SKIP TO Q.A6(d)**).....2

A6(a). Do you use a computer-based system for the nutritional analysis? **PROBE:** For example, a computer program that converts food into amounts of fat, calories, vitamin content and protein content.

YES.....1
NO (**SKIP TO Q.A6(c)**).....2

A6(b). What type of software do you use for the analysis? Can you tell us the name of the computer program and the company that sold it to you?

A6(c). How do you use the results of the nutritional analysis? Do you use the results...(DO NOT READ LIST, CIRCLE ALL THAT APPLY)

	<u>Yes</u>
To improve the nutritional quality of meals.....	1
To ensure that meals meet minimum nutritional standards.....	2
For nutrient-based menu planning.....	3
For some other purpose (SPECIFY).....	4

A6(d). Would you be interested in information about available computer programs that would enable you to do a nutritional analysis?

YES.....1
NO.....2

A7. For each of the following types of food, please tell me whether your food vendors (suppliers) receive their orders for food from the school district or from each individual school. (**READ LIST, CIRCLE RESPONSE FOR EACH FOOD**)

	<u>District</u>	<u>School</u>
Dairy.....	1	2
Bread.....	1	2
Fresh Produce.....	1	2
Canned Foods.....	1	2
Frozen Foods.....	1	2
Fresh Meats.....	1	2
Snack Items.....	1	2
Ice Cream.....	1	2
Staple Foods.....	1	2
Complete Meals.....	1	2

A8. Does your school district use a competitive bid process to select vendors (suppliers) for food products...(**READ LIST AND CIRCLE ONE**)

- In all cases.....1
- Only for large bids.....2
- Not at all.....3

A9. Do you belong to a purchasing cooperative with other school districts so that, as a group, you can purchase larger quantities of food at lower prices?

- YES.....1
- NO (**SKIP TO Q.A10**).....2

A9(a). Which of the following foods do you buy through your purchasing cooperative? (**READ LIST, CIRCLE RESPONSE FOR EACH FOOD**)

	<u>Yes</u>	<u>No</u>
Dairy.....	1	2
Bread.....	1	2
Fresh Produce.....	1	2
Canned Foods.....	1	2
Frozen Foods.....	1	2
Fresh Meats.....	1	2
Snack Items.....	1	2
Ice Cream.....	1	2
Staple Foods.....	1	2
Complete Meals.....	1	2

A10. I am going to describe four different types of kitchens to you. Please tell me how many of each of the four types of kitchen facilities your district currently operates? (**READ LIST**)

	<u>Number of Kitchens</u>
<u>Base kitchens</u> where meals are prepared for serving on-site and for shipment to receiving kitchens	_____
<u>On-site kitchens</u> where meals are prepared for serving only at the facility in which the kitchen is located	_____
<u>Central kitchens</u> where meals are prepared only for serving at receiving or satellite schools. No meals are served on-site at a central kitchen	_____
<u>Receiving or satellite kitchens</u> which obtain partially prepared meals from either base or central kitchens	_____

A10(a). Now I am going to describe four different types of meal service to you. Please tell me how many of your schools use each type. (**READ LIST**)

	<u>Number of Schools</u>
Bulk meal service	_____
Hot and cold pack service	_____
Hot tray pack meal service	_____
Cold pack service only	_____

**ONLY TO BE ASKED OF SFAs IDENTIFIED BY STATES
AS USING FOOD SERVICE MANAGEMENT COMPANIES**

B. FOOD SERVICE MANAGEMENT COMPANIES

Now I have some questions about Food Service Management Companies.

B1. Does your school district use a Food Service Management Company to perform any food service functions this school year?

YES.....1
NO (SKIP TO NEXT SECTION).....2

B2. Are you employed by the Food Service Management Company or by the school district?

MANAGEMENT COMPANY EMPLOYEE...1
SCHOOL DISTRICT EMPLOYEE.....2
CONSULTANT.....3
OTHER (SPECIFY).....4

B3. I am going to read you a list of food service functions and would like you to tell me who performs each of them. The school district, the Food Service Management Company, or is the function shared? (READ LIST. CIRCLE ONE RESPONSE FOR EACH)

	<u>School</u>	<u>Manage- ment Co.</u>	<u>Shared</u>
Preparing reimbursement claims	1	2	3
Accounting and financial recordkeeping	1	2	3
Preparing menus	1	2	3
Preparing free, reduced-price and paid breakfasts	1	2	3
Serving free, reduced-price and paid breakfasts	1	2	3
Preparing free, reduced-price and paid lunches	1	2	3
Serving free, reduced-price and paid lunches	1	2	3
Providing a la carte service	1	2	3
Providing equipment for food preparation	1	2	3
Cafeteria clean-up	1	2	3
Buying food including			
- selecting vendors	1	2	3
- determining quantities and prices	1	2	3
- setting delivery dates	1	2	3
Dealing with donated commodities including			
- determining quantities to be ordered	1	2	3
- arranging for or providing for delivery	1	2	3
- arranging for or providing local storage and transportation	1	2	3
- arranging for or providing processing of commodities	1	2	3
Selling lunch tickets and collecting lunch money	1	2	3

B4. What is the basis for the fee paid to the Food Service Management Company? Is it a....(READ LIST, CIRCLE ONE RESPONSE)

- Flat administrative fee (SKIP TO Q.B5)...1
 - Per-meal fee.....2
 - Combination of administrative fee
and per-meal fee.....3
 - Percentage of total cafeteria
sales (SKIP TO Q.B5).....4
 - Other (SPECIFY) (SKIP TO Q.B5).....5
-
-

B4(a). You said that management fees are computed on a per-meal basis. In order to do this, are a la carte and snack items "translated" into meal equivalents?

- YES.....1
- NO(SKIP TO Q.B5).....2

B4(b). How are the meal equivalents computed? (DO NOT READ LIST)

- Total dollars spent on these
items are divided by the
cost of a standard lunch....1
 - Other (SPECIFY).....2
-

SEE Q.B2, IF RESPONDENT IS AN FSMC EMPLOYEE, SKIP TO NEXT SECTION

B5. Who awards the contract to the Food Service Management Company? Is it....(READ LIST)

- The School Board or School
Food Authority.....1
 - The City purchasing agent.....2
 - Other (SPECIFY).....3
-
-

86. Who monitors the performance of the Food Service Management Company?
 (READ LIST, CIRCLE ALL THAT APPLY.)

	<u>Yes</u>	<u>No</u>
Nobody (SKIP TO NEXT SECTION).....	1	2
School district business manager.....	1	2
Superintendent.....	1	2
School Principals.....	1	2
Someone else (PLEASE SPECIFY)		
<hr/>		
	1	2

87. How often does this monitoring occur? Is it done daily, weekly, monthly, quarterly, or annually? (CHECK ALL THAT APPLY)

DAILY.....	1
WEEKLY.....	2
MONTHLY.....	3
QUARTERLY.....	4
ANNUALLY.....	5
OTHER (SPECIFY).....	6

88. On what basis is the performance of the Food Service Management Company evaluated? (DO NOT READ LIST, CIRCLE ALL THAT APPLY)

ABILITY TO PROVIDE HIGH QUALITY MEALS.....	01
ABILITY TO KEEP PRICES LOW.....	02
ABILITY TO PROVIDE ACCEPTABLE MEALS TO STUDENTS.....	03
EFFICIENT ADMINISTRATION.....	04
CAREFUL RECORD-KEEPING.....	05
LEVEL OF STUDENT PARTICIPATION.....	06
AUDITS AND REVIEW.....	07
OTHER (PLEASE SPECIFY)	

96

89. Does the district perform an independent meal count periodically, to check on the accuracy of the meal count claimed by the Food Service Management Company?

YES.....	1
NO.....	2

C. REIMBURSEMENT CLAIMS

Now I have some questions about how you count the number of meals served in your school district.

- C1. How does your school district keep track of the number of meals served to children who receive free meals, children who pay reduced-price, and children who pay full-price? That is, how do you keep track of the number of meals served each day in each category? (DO NOT READ LIST: CIRCLE ALL THAT APPLY)

- CASHIERS CHECK LISTS OF CHILDREN IN EACH CATEGORY.....01
- TICKETS ARE CODED TO REFLECT THE CHILD'S STATUS.....02
- CATEGORICAL COUNT BY CLASSROOM TEACHER IN THE MORNING.....03
- CATEGORICAL COUNT BY CLASSROOM TEACHER THAT IS VERIFIED AT THE POINT OF SERVICE.....04
- SCANNERS FOR ID CARDS.....05
- OTHER (PLEASE SPECIFY) _____

96

- C2. Does your school district monitor or check your school cafeterias to see whether the number of meals claimed in each category (free, reduced, and paid) is accurate?

YES.....1
NO (SKIP TO NEXT SECTION).....2

- C2(a). In doing the monitoring, does someone from your school district check a school's meal count reports against the number of eligible applications for that school? Are meal counts checked against attendance records?

	<u>Yes</u>	<u>No</u>
CHECK VS. APPLICATIONS	1	2
CHECK VS. ATTENDANCE	1	2

- C2(b). Are there any other ways that your schools' reimbursement claims are checked or monitored for accuracy?

YES (PLEASE SPECIFY).....1
NO.....2

C2(c). Does either a central office administrator or a school building principal conduct an on-site review of actual meal accounting practices? (PROBE: THIS MEANS, DOES SOMEONE CHECK HOW ACCURATE THE MAL ACCOUNTING PRACTICES ARE.)

YES.....1
NO.....2

D. ESTABLISHING MEAL PRICE

The next questions will be about your meal prices.

D1. Please think back to the last time you changed the price of a standard reimbursable lunch for students who pay full price. Was this change in price an increase or decrease?

- INCREASE.....1
- DECREASE (SKIP TO Q.D3).....2
- DON'T KNOW (SKIP TO Q.D4).....3
- NO CHANGE (SKIP TO Q.D4).....4

D2. What were the reasons that you increased your lunch price? (DO NOT READ LIST, CIRCLE ALL THAT APPLY.)

- INCREASED FOOD COSTS.....01
- INCREASED LABOR COSTS.....02
- LOWER PARTICIPATION.....03
- DECREASED STATE REVENUE.....04
- DECREASED FEDERAL SUBSIDIES.....05
- DECREASED LOCAL SUBSIDIES.....06
- DECREASED PROFITS FROM A LA CARTE SALES.....07
- OTHER (PLEASE SPECIFY).....96

SKIP TO Q.D4

D3. What were the reasons that you decreased your lunch price? (DO NOT READ LIST, CIRCLE ALL THAT APPLY)

- DECREASED FOOD COSTS.....01
- DECREASED LABOR COSTS.....02
- HIGHER PARTICIPATION.....03
- INCREASED STATE REVENUE.....04
- INCREASED FEDERAL SUBSIDIES.....05
- INCREASED LOCAL SUBSIDIES.....06
- INCREASED PROFITS FROM A LA CARTE SALES.....07
- EXCESS NET CASH RESOURCES IN SFA ACCOUNT.....08
- OTHER (SPECIFY).....96

**ASK Q.D4 IF SFA PARTICIPATES IN THE
SBP (SEE Q.A1), OTHERWISE SKIP TO Q.D7**

D4. Please think back to the last time you changed the price of a standard reimbursable breakfast for students paying full price. Was this change in price an increase or decrease?

- INCREASE.....1
- DECREASE (SKIP TO Q.D6).....2
- DON'T KNOW (SKIP TO Q.D7).....3
- NO CHANGE (SKIP TO Q.D7).....4

D5. What were the reasons that you increased your breakfast price? (DO NOT READ LIST, CIRCLE ALL THAT APPLY)

- INCREASED FOOD COSTS.....01
- INCREASED LABOR COSTS.....02
- LOWER PARTICIPATION.....03
- DECREASED STATE REVENUE.....04
- DECREASED FEDERAL SUBSIDIES.....05
- DECREASED LOCAL SUBSIDIES.....06
- DECREASED PROFITS FROM A LA CARTE SALES.....07
- CHANGE IN SEVERE NEED STATUS.....08
- OTHER (SPECIFY).....96

SKIP TO Q.D7

D6. What were the reasons that you decreased your breakfast price? (DO NOT READ LIST, CIRCLE ALL THAT APPLY)

- DECREASED FOOD COSTS.....01
- DECREASED LABOR COSTS.....02
- HIGHER PARTICIPATION.....03
- INCREASED STATE REVENUE.....04
- INCREASED FEDERAL SUBSIDIES.....05
- INCREASED LOCAL SUBSIDIES.....06
- INCREASED PROFITS FROM A LA CARTE SALES.....07
- EXCESS NET CASH RESOURCES IN SFA ACCOUNT.....08
- OTHER (PLEASE SPECIFY).....96

D7. Does your school district typically subsidize the school food service program outside the school food service account in any of the following ways? Does it....(READ LIST, CIRCLE A RESPONSE FOR EACH ITEM)

	<u>YES</u>	<u>NO</u>
Cover any end-of-year loss.....	1	2
Pay for some salaries, for example, your salary.....	1	2
Pay for fringe benefits.....	1	2
Pay for supervision costs at meal time.....	1	2
Pay for storage or transportation of purchased food or donated commodities.....	1	2
Provide storage space for purchased food or donated commodities.....	1	2
Provide transportation for purchased food or donated commodities.....	1	2
Provide a per-meal reimbursement (SEE Q.D8).....	1	2
Pay for custodial costs.....	1	2
Pay for utility costs.....	1	2
Provide cafeteria equipment.....	1	2
Provide transportation of prepared meals to satellite kitchens.....	1	2
Pay for indirect costs (PLEASE SPECIFY).....	1	2

D7(a). Does your district subsidize the school food service in any other ways. (PLEASE SPECIFY)

D8. (IF SCHOOL DISTRICT PROVIDES A PER-MEAL REIMBURSEMENT, ASK:) You said that the school district provides a per-meal reimbursement. What was the per-lunch reimbursement last year for (ITEM)? What is it this year? (RECORD EITHER PER-MEAL VALUE OR TOTAL \$)

1987-88 Free Lunches: _____ c PER LUNCH OR _____ TOTAL \$
 Reduced Price Lunches: _____ c PER LUNCH OR _____ TOTAL \$
 Paid Lunches: _____ c PER LUNCH OR _____ TOTAL \$
 Total Lunches: _____ c PER LUNCH OR _____ TOTAL \$

1988-89 Free Lunches: _____ c PER LUNCH OR _____ TOTAL \$
 Reduced Price Lunches: _____ c PER LUNCH OR _____ TOTAL \$
 Paid Lunches: _____ c PER LUNCH OR _____ TOTAL \$
 Total Lunches: _____ c PER LUNCH OR _____ TOTAL \$

D9. What are the steps that you take in order to avoid an increase in the prices charged to students, or to keep prices down? (**DO NOT READ LIST, CIRCLE ALL THAT APPLY**)

- SWITCH TO LOWER PRICED FOODS.....01
- CUT BACK ON ADMINISTRATIVE LABOR.....02
- CUT BACK ON KITCHEN LABOR.....03
- SUBSTITUTE LOWER-PAID PART-TIME STAFF THAT DO NOT
RECEIVE FRINGE BENEFITS FOR FULL-TIME STAFF.....04
- INCREASE THE USE OF DONATED COMMODITIES.....05
- TRY TO INCREASE A LA CARTE SALES.....06
- INCREASE PRICE OF A LA CARTE ITEMS.....07
- INCREASE PRICE OF ADULT MEALS.....08
- IMPROVE PRODUCTIVITY (MEALS/HOUR).....09
- POSTPONE EQUIPMENT REPAIR/REPLACEMENT.....10
- USE SCHOOL DISTRICT GENERAL FUNDS TO COVER DIFFERENCE.....11
- MOVE TO SATELLITE LUNCHES.....12
- OTHER (**PLEASE SPECIFY**).....96

D10. When you find that you have to raise meal prices, do you take any special steps to maintain participation?

- YES.....1
- NO (**SKIP TO NEXT SECTION**).....2

D10(a). What steps do you take? (**DO NOT READ LIST, CIRCLE ALL THAT APPLY**)

- IMPROVE MEAL QUALITY.....1
- INCREASE STUDENT OR PARENT AWARENESS OF THE PROGRAM....2
- OFFER MORE POPULAR FOODS.....3
- OTHER (**PLEASE SPECIFY**).....6

REFER TO Q.A1. ASK THIS SECTION ONLY IF
SCHOOL DISTRICT PARTICIPATES IN SBP

E. SCHOOL BREAKFAST PROGRAM

Now I have some questions about the Department of Agriculture's School Breakfast Program.

E1. Do you offer any hot foods as part of the School Breakfast Program?

YES.....1
NO.....2

E2. Do you offer a choice of breakfast items in the School Breakfast Program?

YES.....1
NO.....2

E3. I am going to read you a list of foods that might be served at breakfast. Please tell me whether any of your schools offer these foods as part of the School Breakfast Program. Do you offer...(READ LIST, CIRCLE A RESPONSE FOR EACH FOOD)

	<u>Yes</u>	<u>No</u>
Milk.....	1	2
Chocolate milk.....	1	2
Fortified cold cereal.....	1	2
Unfortified cold cereal.....	1	2
Hot cereal.....	1	2
Citrus juice.....	1	2
Non-citrus juice.....	1	2
Bread and rolls.....	1	2
Cakes and cookies.....	1	2
Pancakes or waffles.....	1	2
Meat such as bacon, ham or sausage.....	1	2
Eggs.....	1	2
Cheese.....	1	2
Peanut butter.....	1	2

E4. Now can you tell me which of these foods are contained in a typical breakfast? I'll read the list again. (READ LIST, CIRCLE A RESPONSE FOR EACH FOOD)

	<u>Yes</u>	<u>No</u>
Milk.....	1	2
Chocolate milk.....	1	2
Fortified cold cereal.....	1	2
Unfortified cold cereal.....	1	2
Hot cereal.....	1	2
Citrus juice.....	1	2
Non-citrus juice.....	1	2
Bread and rolls.....	1	2
Cakes and cookies.....	1	2
Pancakes or waffles.....	1	2
Meat such as bacon, ham or sausage.....	1	2
Eggs.....	1	2
Cheese.....	1	2
Peanut butter.....	1	2

E5. Does your school district have any schools that are eligible for the School Breakfast Program's severe need rate? That is, the school is eligible for an extra breakfast reimbursement because it serves 40% or more of its lunches at free or reduced-price rates. I would like to know if any schools are eligible, whether or not they actually applied for or receive the extra reimbursement.

YES.....1
NO (SKIP TO NEXT SECTION).....2

E6. Are any of these eligible schools not receiving the severe-need reimbursements? That is, the school is eligible to receive the severe-need payments but for some reason does not do so.

YES.....1
NO (SKIP TO Q.E7).....2

E6(a). How many schools? _____

E6(b). Why don't these schools claim the extra reimbursement for breakfasts? (DO NOT READ LIST, CIRCLE ALL THAT APPLY)

- COST ACCOUNTING REQUIREMENTS...1
- DID NOT SUBMIT APPLICATION....2
- OTHER (SPECIFY).....3

E7. Are enhanced meals, that is, meals exceeding the minimum requirements, provided in the School Breakfast Program?

- YES.....1
- NO (SKIP TO Q.E8).....2

E7(a). Are these enhanced breakfasts provided in all schools serving breakfast or just those qualifying for severe-need payments?

- ALL SCHOOLS.....1
- SEVERE-NEED SCHOOLS ONLY.....2

E8. Are the breakfasts served in severe-need schools different in any way from the breakfasts served in non-severe need schools?

- YES.....1
- NO (SKIP TO NEXT SECTION).....2

E8(a). How do the breakfasts differ? (DO NOT READ LIST, CIRCLE ALL THAT APPLY)

- LARGER PORTIONS.....1
- DIFFERENT FOODS.....2
- HOT VS. COLD.....3
- OTHER.....4

F. USE OF SCHOOL FOOD SERVICE FOR ALTERNATIVE PROGRAMS

The next set of questions deals with the use of school food service facilities for alternative programs.

F1. Do you use the food service facilities in your district for programs other than the National School Lunch and School Breakfast Programs?

YES.....1
 NO (SKIP TO NEXT SECTION).....2

F2. Please tell me whether any of the following programs obtain meals prepared in your facilities. (READ LIST, CIRCLE A RESPONSE FOR EACH ITEM)

	<u>Yes</u>	<u>No</u>
Day Care participating in the Child Care Food Program.....	1	2
Day Care not participating in the Child Care Food Program.....	1	2
The Summer Food Service Program.....	1	2
The Elderly Feeding Programs.....	1	2
Other School Food Authorities.....	1	2

F2(a). Are there any other programs that obtain meals prepared in your facilities? (SPECIFY)

F3. Has the provision of meals to these programs had any impact on your traditional meal service?

YES.....1
 NO (SKIP TO NEXT SECTION).....2

F3(a). What have the impacts been? (DO NOT READ LIST, CIRCLE ALL THAT APPLY)

- REDUCES PER-MEAL COSTS.....1
- MORE EFFICIENT USE OF STAFF...2
- INCREASED CAFETERIA SALES.....3
- MORE EFFICIENT USE OF
FACILITIES.....4
- IMPROVED INSTITUTIONAL
PRACTICES.....5
- OTHER.....6

G. DONATED COMMODITIES

Now I have some questions about your use of donated commodities in the school lunch program.

- G1. Please tell me the total dollar value of the entitlement commodities that you received last year. If you don't know the total dollar value, can you tell me the per-meal value?

Please also tell me the total dollar value of the bonus commodities that you received last year. Again, if you don't know the total dollar value can you tell me the per-meal value?

	<u>Per Meal</u>	<u>Total</u>
ENTITLEMENT COMMODITIES	_____	_____
BONUS COMMODITIES	_____	_____

- G2. The Department of Agriculture offers some of its donated commodities in several different forms, for example, beef in rolls, patties or patties with VPP. How do you voice your preference for the form that commodities come to you? (**DO NOT READ LIST, CIRCLE ALL THAT APPLY**)

STATE SENDS ORDER FORM.....1
 STATE DOES FOOD PREFERENCE
 SURVEY.....2
 CALL STATE WITH SUGGESTIONS...3
 DO NOT VOICE PREFERENCE.....4
 OTHER.....6

- G3. Did your school district receive any donated commodities from the Department of Agriculture that were in off-condition last year? That is, they were spoiled, defrosted, broken, etc.

YES.....1
 NO (SKIP TO Q.G4).....2

G3(a). I would like to read you a list of five different types of foods. For each type, please tell me whether you received any off-condition commodities, what the specific problem was, and the number of cases that were affected. (**READ LIST**)

	<u>Yes</u>	<u>No</u>	<u>Specific Problems</u>	<u># of Cases</u>
Fruits.....	1	2	_____	_____
Vegetables.....	1	2	_____	_____
Poultry.....	1	2	_____	_____
Dairy.....	1	2	_____	_____
Grains and oils.....	1	2	_____	_____

G3(b). What do you do with off-condition commodities? (**DO NOT READ LIST, CIRCLE ALL THAT APPLY**)

- DO NOT ACCEPT DELIVERY, RETURN THEM.....1
- ACCEPT AND USE THEM.....2
- ACCEPT THEM BUT DO NOT USE THEM....3
- REPORT PROBLEM AND OBTAIN REPLACEMENT.....4
- OTHER (**SPECIFY**).....5

G3(c). Do you have more problems with the quality of commercially purchased food than with donated commodities from the Department of Agriculture?

- YES.....1
- NO.....2

G4. Approximately how many written complaints about the Department of Agriculture's donated commodity foods did you file with your State Agency last year? How many verbal complaints did you make? (**IF NONE, ENTER ZERO**)

NUMBER OF WRITTEN COMPLAINTS _____

NUMBER OF VERBAL COMPLAINTS _____

H. PROCESSING

The following questions deal with the processing of donated commodities into various end-products. For example, reforming bulk ground beef into patties, using donated flour to make cookies, or using donated cheese to make pizzas.

H1. Is your school district using any processed end-products made with commodities donated by the Department of Agriculture this school year?

- YES.....1
- NO (**SKIP TO NEXT SECTION**).....2
- DON'T KNOW (**SKIP TO NEXT SECTION**)..3

H2. Does your school district enter into agreements with food processors directly? We are interested only in arrangements initiated locally between your school district and food processors that may require State Agency approval. Right now, we do not want to talk about agreements that are initiated at the State level.

- YES.....1
- NO (**SKIP TO Q.H5**).....2

H2(a). Can you please give me a list of each end product and the donated commodities it contains? Remember, this is only for end-products prepared under agreements that your school district initiated.

H2(b). For each of the end products that you named, how are you compensated for the value of the commodities used? Do you receive a discount or a rebate? For any of these products do you pay a fee for processing or repackaging services?

<u>End Product</u>	H2a. <u>Donated Commodities</u>	H2b. <u>Discount</u>	H2b. <u>Rebate</u>	<u>Fee</u>
_____	_____	1	2	3
_____	_____	1	2	3
_____	_____	1	2	3
_____	_____	1	2	3
_____	_____	1	2	3
_____	_____	1	2	3
_____	_____	1	2	3
_____	_____	1	2	3
_____	_____	1	2	3
_____	_____	1	2	3
_____	_____	1	2	3

H3. Do you use bid procedures to select food processors?

YES.....1
NO (SKIP TO Q.H4).....2

H3(a). What are the procedures that you use? (DO NOT READ LIST, CIRCLE ALL THAT APPLY)

OBTAIN QUOTES OVER THE TELEPHONE...1
OBTAIN WRITTEN BIDS IN REPOSE
TO A FORMAL TENDER.....2
OTHER (SPECIFY).....3

H3(b). Do you ask for bids based on gross price, net price or both?

GROSS PRICE.....1
NET PRICE.....2
BOTH.....3

H4. How do you know that the product that you receive through a local processing agreement is formulated to meet your specifications? (DO NOT READ LIST, CIRCLE ALL THAT APPLY)

TRUST THE PROCESSOR.....1
DO A NUTRITIONAL ANALYSIS.....2
WEIGH THE PRODUCT.....3
OTHER (SPECIFY).....6

H5. Do you purchase any processed end-products made with USDA commodities through State or National processing agreements on a fee for service basis? On a rebate basis? On a discount basis?

	<u>Yes</u>	<u>No</u>
FEE-FOR-SERVICE.....	1	2
REBATE.....	1	2
DISCOUNT.....	1	2

(IF RESPONDENT ANSWERS "NO" TO ALL CATEGORIES, SKIP TO NEXT SECTION)

H5(a). How many processed end-products of each type do you buy? By "processed end-product" we mean a generic type of food that uses the same commodity ingredients. For example, cookies made from essentially the same ingredients (e.g. donated flour and shortening) are to be considered a single product, despite the fact that several different types of cookies might be produced. However, if similar products require different commodity ingredients (such as beef burritos and cheese burritos) they should be treated as separate products for purposes of this question. So, how many fee-for-service end products do you buy? How many discounted end-products do you buy? How many rebate end-products do you buy?

_____ Number of fee-for-service end-products
 _____ Number of discount end-products
 _____ Number of rebate end-products
 _____ Don't know

H6. Are you satisfied with the quality of the end-products containing USDA commodities that you receive through state or national processing agreements?

YES (SKIP TO Q.H7).....1
 NO.....2

H6(a). Why are you dissatisfied?

H7. **SEE Q.H2(b) AND Q.H5. IF ANY PROCESSED PRODUCT IS PURCHASED AT A DISCOUNT, ASK:** You said that you purchased some discounted end-products. What kind of record-keeping is required for these discounted items?

H7(a). How are the discounts calculated?

H7(b). Does the invoice for an end-product always state the value of the discount, sometimes state the value of the discount, or never state the value of the discount?

ALWAYS (SKIP TO Q.H8).....1
SOMETIMES.....2
NEVER.....3

H7(c). For end-products where the value of the USDA commodity discount does not appear on the invoice, how do you know that you have received a discount, and how do you know the amount of the discount?

H8. **SEE Q.H2(b) AND Q.H5. IF ANY PROCESSED PRODUCT IS PURCHASED WITH A REBATE, ASK:** You said that you purchased some end-products with rebates. For the products you purchase with a rebate, how long do you usually wait to file for the rebate? (**READ LIST, CIRCLE ONE RESPONSE**)

less than 1 week.....1
1 - 2 weeks.....2
3 - 4 weeks.....3
1 - 2 months.....4
3 - 6 months.....5
more than 6 months.....6
do not file for rebate.....7

H8(a). After you file for the rebate, how long do you usually wait to receive your payment? (**READ LIST, CIRCLE ONE RESPONSE**)

less than 1 week.....1
1 - 2 weeks.....2
3 - 4 weeks.....3
1 - 2 months.....4
3 - 6 months.....5
more than 6 months.....6

I. TECHNICAL ASSISTANCE

This is my last set of questions. They deal with technical assistance or training on any aspect of food service that you may have received this year.

ASK 11. AND 12. AS A UNIT FOR EACH FUNCTION

11. I would like to read you a list of school food service functions in which you or your staff might need training or technical assistance. For each function, please tell me whether you or your staff need no training, a little training, or a lot of training. (READ LIST)

11(a). IF A LITTLE OR A LOT ASK:

Is training for this available in this state?

12. Did you or your staff actually receive any training in this function between July 1, 1988 and the present.

IF YES, ASK (a) AND (b)

12(a). What type of agency provided the training? Was it a state agency, a local college or university, or some other agency?

12(b). Who participated in the training? Was it your cafeteria managers, other cafeteria workers, or school administrators?

TERMINATION

That was my last question. Thank you very much for your time and patience. Your answers will be kept completely confidential, and will be combined with the answers from hundreds of other school districts so that the Department of Agriculture has the best possible information on the Child Nutrition Programs.

Again, thank you.

TECHNICAL ASSISTANCE

Training Areas	Q11. Training Needed			Q11(a). Training Available		Q12. Training Obtained		Q12(a). Who* Provided (ENTER CODE)			Q12(b). Who Participated Managers=1 Cafeteria Workers=2 School Administrators=3 Other=4			
	<u>A</u> Lot	<u>A</u> Little	None	Yes	No	Yes	No							
Food purchasing	1	2	3	1	2	1	2	1	2	3	1	2	3	4
Food sanitation/safety	1	2	3	1	2	1	2	1	2	3	1	2	3	4
Menu planning	1	2	3	1	2	1	2	1	2	3	1	2	3	4
Food preparation	1	2	3	1	2	1	2	1	2	3	1	2	3	4
Contracting procedures	1	2	3	1	2	1	2	1	2	3	1	2	3	4
Recordkeeping	1	2	3	1	2	1	2	1	2	3	1	2	3	4
Merchandising	1	2	3	1	2	1	2	1	2	3	1	2	3	4
Program Regulations and Procedures	1	2	3	1	2	1	2	1	2	3	1	2	3	4
Use of Commodities	1	2	3	1	2	1	2	1	2	3	1	2	3	4
Other (SPECIFY)	1	2	3	1	2	1	2	1	2	3	1	2	3	4
	1	2	3	1	2	1	2	1	2	3	1	2	3	4
	1	2	3	1	2	1	2	1	2	3	1	2	3	4

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*State agency = 1
 Local college or university = 2
 Other = 3

APPENDIX E
YEAR ONE SFA MANAGER MAIL SURVEY

CHILD NUTRITION PROGRAM OPERATIONS STUDY

SCHOOL FOOD AUTHORITY
MAIL SURVEY

3X5 SFA Label
Containing ID, Year of Survey,
Name and Title of Respondent

OMB CLEARANCE NUMBER:

EXPIRATION DATE:

MAIL: PROGRAM PARTICIPATION

Mi. Please record the total number of schools in your school district and the number of schools that participate in NSLP and/or SBP for the current and the prior school year. Please also record the number of schools that participated in the SBP as a severe need school. If possible, please provide this information separately for elementary and middle/secondary schools.

<u>Number of Schools</u>				Participating in SBP as a Severe Need School
	<u>Total</u>	<u>Participating in NSLP</u>	<u>Participating in SBP</u>	
M1a. <u>1988-89</u>				
Elementary	_____	_____	_____	_____
Middle/Secondary	_____	_____	_____	_____
All Schools	_____	_____	_____	_____
M1b. <u>1987-88</u>				
Elementary	_____	_____	_____	_____
Middle/Secondary	_____	_____	_____	_____
All Schools	_____	_____	_____	_____

MAIL: ENROLLMENT AND ATTENDANCE

M2. Please record the total number of children enrolled (as of October 1) in your school district for the current and the prior school year. Then, we would like to know how many of the children enrolled are able to participate in the NSLP and the SBP. So, for example, you should exclude kindergarteners who do not have the opportunity to eat lunch from your count of potential NSLP participants, and you should exclude children in schools that do not offer the NSLP, and the SBP. If possible, please provide this information separately for elementary and middle/secondary schools.

Finally, can you please record the number of children that are Black or Hispanic, and the number who are female, enrolled for each year?

	<u>Total Enrollment</u>	<u>Potential NSLP Participants</u>	<u>Potential SBP Participants</u>	<u>Number Black or Hispanic Enrolled</u>	<u>Number Female Enrolled</u>
M2a. <u>1988-89</u>					
Elementary	_____	_____	_____	_____	_____
Middle/Secondary	_____	_____	_____	_____	_____
All Schools	_____	_____	_____	_____	_____
M2b. <u>1987-88</u>					
Elementary	_____	_____	_____	_____	_____
Middle/Secondary	_____	_____	_____	_____	_____
All Schools	_____	_____	_____	_____	_____

M3. Please record the Average Daily Attendance for all children in your school district for the current and the prior school year. If possible, please provide ADA separately for children attending elementary and middle/secondary schools.

	<u>Average Daily Attendance</u>
M3a.	<u>1988-89</u>
Elementary	_____
Middle/Secondary	_____
All Schools	_____
M3b.	<u>1987-88</u>
Elementary	_____
Middle/Secondary	_____
All Schools	_____

M3c. How is Average Daily Attendance calculated for your school district?

MAIL: FOOD PROGRAM PARTICIPATION

M4. Please record the number of operating days for the NSLP and SBP for the prior school year. If possible, please provide this information separately for elementary and middle/secondary schools.

<u>1987-88</u>	<u>Number of Operating Days</u>	
	<u>NSLP</u>	<u>SBP</u>
Elementary	_____	_____
Secondary	_____	_____
All Schools	_____	_____

M5. Please record the number of children approved for free and reduced-price meals as of October 31 for the current and the prior school year and the number of children denied free or reduced-price status. If possible, please provide this information separately for elementary and middle/secondary schools.

	<u>Number of Approved Children</u>		<u>Number of Denied Children</u>
	<u>Free</u>	<u>Reduced</u>	
M5a. <u>1988-89</u>			
Elementary	_____	_____	_____
Middle/Secondary	_____	_____	_____
All Schools	_____	_____	_____
M5b. <u>1987-88</u>			
Elementary	_____	_____	_____
Middle/Secondary	_____	_____	_____
All Schools	_____	_____	_____

M6. Please record the number of reimbursable lunches served in the NSLP during the prior school year. If possible, please provide this information separately for elementary and middle/secondary schools.

	Type of Lunch			Total Student Lunches
	Free Lunches	Reduced Price Lunches	Full Price Lunches	
<u>1987-88</u>				
Elementary	_____	_____	_____	_____
Middle/Secondary	_____	_____	_____	_____
All Schools	_____	_____	_____	_____

M7. Please record the number of reimbursable breakfasts served in the SBP during the prior school year. How many of these reimbursable breakfasts were served in "severe need" schools? If possible, please provide this information separately for elementary and middle/secondary schools.

	Type of Breakfast				
	Free Breakfasts (Including severe need)	Reduced Price Breakfasts (Including severe need)	Full Price Breakfasts	Total Student Breakfasts	Total "Severe Need" Breakfasts Free Reduced
<u>1987-88</u>					
Elementary	_____	_____	_____	_____	_____
Middle/Secondary	_____	_____	_____	_____	_____
All Schools	_____	_____	_____	_____	_____

MAIL: MEAL PRICES

M8. Please record the price charged at the elementary and middle/secondary school levels for standard reimbursable* reduced-price and full price student and adult breakfasts at the start of the current year and each school year back to 1983-84. Please record any mid-year change in price.

	<u>Breakfast Price Category</u>		
	<u>Reduced-Price</u>	<u>Full Price</u>	<u>Adult Price</u>
M8a. <u>1988-89</u>			
Elementary (start of year)	\$ _____.	\$ _____.	\$ _____.
(mid year change)	\$ _____.	\$ _____.	\$ _____.
Middle/Secondary (start of year)	\$ _____.	\$ _____.	\$ _____.
(mid year change)	\$ _____.	\$ _____.	\$ _____.
M8b. <u>1987-88</u>			
Elementary (start of year)	\$ _____.	\$ _____.	\$ _____.
(mid year change)	\$ _____.	\$ _____.	\$ _____.
Middle/Secondary (start of year)	\$ _____.	\$ _____.	\$ _____.
(mid year change)	\$ _____.	\$ _____.	\$ _____.
M8c. <u>1986-87</u>			
Elementary (start of year)	\$ _____.	\$ _____.	\$ _____.
(mid year change)	\$ _____.	\$ _____.	\$ _____.
Middle/Secondary (start of year)	\$ _____.	\$ _____.	\$ _____.
(mid year change)	\$ _____.	\$ _____.	\$ _____.
M8d. <u>1985-86</u>			
Elementary (start of year)	\$ _____.	\$ _____.	\$ _____.
(mid year change)	\$ _____.	\$ _____.	\$ _____.
Middle/Secondary (start of year)	\$ _____.	\$ _____.	\$ _____.
(mid year change)	\$ _____.	\$ _____.	\$ _____.
M8e. <u>1984-85</u> (if available)			
Elementary (start of year)	\$ _____.	\$ _____.	\$ _____.
(mid year change)	\$ _____.	\$ _____.	\$ _____.
Middle/Secondary (start of year)	\$ _____.	\$ _____.	\$ _____.
(mid year change)	\$ _____.	\$ _____.	\$ _____.
M8f. <u>1983-84</u> (if available)			
Elementary (start of year)	\$ _____.	\$ _____.	\$ _____.
(mid year change)	\$ _____.	\$ _____.	\$ _____.
Middle/Secondary (start of year)	\$ _____.	\$ _____.	\$ _____.
(mid year change)	\$ _____.	\$ _____.	\$ _____.

*If you have more than one standard reimbursable breakfast, please list the price for the most frequently purchased breakfast.

M9. Please record the price charged at the elementary and middle/secondary school levels for standard reimbursable* reduced-price and full price student and adult lunches at the start of the current year and each school year back to 1983-84. Please record any mid year change in price.

	Lunch Price Category		
	Reduced-Price	Full Price	Adult Price
M9a. 1988-89			
Elementary (start of year)	\$ _____ . _____	\$ _____ . _____	\$ _____ . _____
(mid year change)	\$ _____ . _____	\$ _____ . _____	\$ _____ . _____
Middle/Secondary (start of year)	\$ _____ . _____	\$ _____ . _____	\$ _____ . _____
(mid year change)	\$ _____ . _____	\$ _____ . _____	\$ _____ . _____
M9b. 1987-88			
Elementary (start of year)	\$ _____ . _____	\$ _____ . _____	\$ _____ . _____
(mid year change)	\$ _____ . _____	\$ _____ . _____	\$ _____ . _____
Middle/Secondary (start of year)	\$ _____ . _____	\$ _____ . _____	\$ _____ . _____
(mid year change)	\$ _____ . _____	\$ _____ . _____	\$ _____ . _____
M9c. 1986-87			
Elementary (start of year)	\$ _____ . _____	\$ _____ . _____	\$ _____ . _____
(mid year change)	\$ _____ . _____	\$ _____ . _____	\$ _____ . _____
Middle/Secondary (start of year)	\$ _____ . _____	\$ _____ . _____	\$ _____ . _____
(mid year change)	\$ _____ . _____	\$ _____ . _____	\$ _____ . _____
M9d. 1985-86			
Elementary (start of year)	\$ _____ . _____	\$ _____ . _____	\$ _____ . _____
(mid year change)	\$ _____ . _____	\$ _____ . _____	\$ _____ . _____
Middle/Secondary (start of year)	\$ _____ . _____	\$ _____ . _____	\$ _____ . _____
(mid year change)	\$ _____ . _____	\$ _____ . _____	\$ _____ . _____
M9e. 1984-85 (if available)			
Elementary (start of year)	\$ _____ . _____	\$ _____ . _____	\$ _____ . _____
(mid year change)	\$ _____ . _____	\$ _____ . _____	\$ _____ . _____
Middle/Secondary (start of year)	\$ _____ . _____	\$ _____ . _____	\$ _____ . _____
(mid year change)	\$ _____ . _____	\$ _____ . _____	\$ _____ . _____
M9f. 1983-84 (if available)			
Elementary (start of year)	\$ _____ . _____	\$ _____ . _____	\$ _____ . _____
(mid year change)	\$ _____ . _____	\$ _____ . _____	\$ _____ . _____
Middle/Secondary (start of year)	\$ _____ . _____	\$ _____ . _____	\$ _____ . _____
(mid year change)	\$ _____ . _____	\$ _____ . _____	\$ _____ . _____

*If you have more than one standard reimbursable lunch, please list the price for the most frequently purchased lunch.

MAIL: ANNUAL REVENUES

M10. Please record all income received by your school district's food service program for the prior school year.

School Year
1987-88

Source of Income

M10a. Total Income..... _____

Income from school district sources

M10b. • student meal payments..... _____

M10c. • all other cafeteria sales including a la carte and adult meals..... _____

M10d. • subsidy from school district..... _____

M10e. • contributions from community..... _____

M10f. • other local income..... _____

Income from state sources

M10g. • state meal reimbursement subsidy..... _____

M10h. • other state income..... _____

Income from Federal sources

M10i. • Federal meal reimbursement subsidy..... _____

M10j. • Assigned value of donated commodities..... _____

M10k. • Other Federal income..... _____

MAIL: ANNUAL EXPENDITURES

Mll. Please record all expenditures made by the school district's food service account for the prior school year.

		<u>School Year</u>
		<u>1987-88</u>
<u>Type of Expenditure</u>		
Mlla.	Total Expenditures.....	_____
Mllb.	Labor Salary.....	_____
Mllc.	Fringe benefits.....	_____
Mlld.	Total labor.....	_____
Mlle.	Food Purchased food.....	_____
Mllf.	Capital Expenditures.....	_____
Mllg.	Supplies Single service supplies such as spoons, forks, plates; all other supplies.....	_____
Mllh.	Storage and Transportation.....	_____
Mlli.	Contracted Services (e.g., ADP, profes- sional services).....	_____
Mllj.	Overhead/Indirect Costs..... (Please specify the cost elements included in overhead)	_____

Mllk.	Other _____	_____
	_____	_____
	_____	_____

MAIL: COMMODITY INVENTORY

M12. What is the dollar value (USDA-assigned value) of donated commodities you had in inventory at the beginning of this school year, and at the beginning and end of last year, that is, 1988-89 and 1987-88?

	<u>USDA-Assigned Value</u>	
	<u>Beginning Inventory</u>	<u>Ending Inventory</u>
1988-89	\$ _____	\$ <u>n.a.</u>
1987-88	\$ _____	\$ _____

M12a. For each of the following types of donated commodities, please indicate the approximate dollar value (USDA-assigned value) of the USDA donated commodities you held in inventory over the past summer as well as the value of these types of commodities you are currently holding in inventory.

<u>Type of Commodity</u>	<u>USDA Value of Commodities</u>	
	<u>In Inventory During Past Summer</u>	<u>In Inventory Currently</u>
Fruits	_____	_____
Vegetables	_____	_____
Meats	_____	_____
Poultry	_____	_____
Dairy	_____	_____
Grains and oils	_____	_____

MAIL: SCHOOL-LEVEL INFORMATION

We need some information from one school in your district. Please follow the directions given below to randomly select one school. Then, please answer the questions in this section about the school you have selected. If you have any questions or problems please call Joan Kooistra or Kristin Wulfsberg at 1-800-___-___.

Directions to Randomly Select a School

STEP 1

We are defining elementary schools as those schools with a Kindergarten or Grade 1. Secondary schools are those with no Kindergarten or Grade 1. Thus for example, a K-8 school would be considered an elementary school, while a 6-12 school would be considered secondary.

Does your SFA:

Only have elementary schools? If so, then SKIP TO STEP 3

Only have secondary schools? If so, then SKIP TO STEP 3

Have both elementary and secondary schools? If so, then GO TO STEP 2

Only have one school? If so, it is the school we need some information on. SKIP STEPS 2, 3, AND 4.

STEP 2

We would like you to randomly select one elementary (secondary) school from those in your SFA. If your SFA only has one elementary (secondary) school, then that is the school you will report. If your SFA has two or more elementary (secondary) schools go to STEP 4.

STEP 3

To select one school you must first count up the number of schools in your SFA. Call this number N.

- If N is less than 10 use the random numbers in Column A.
- If N is between 10 and 99 use the random numbers in Column B.
- If N is 100 or greater use the random numbers in Column C.

Go to the top of the column you are using and circle the first random number that is not greater than N. Call this number R.

Go to the list of schools in your SFA and count from the beginning to the "Rth" school. This is the selected school.

STEP 3 EXAMPLE:

Let us say the instructions tell you to select one school out of N=37 in your SFA. You would go to column B and, starting at the top, locate the first random number that is not greater than 37. Looking at column B the first random number not greater than 37 is R=33. You would then go to the list of your schools and count down to the 33rd on the list. This would be the selected school.

Other Information

When the interviewer contacts you they will ask for the total number of elementary schools in your SFA if you selected an elementary school or the total number of secondary schools in your SFA if you selected a secondary school.

Random Numbers for Selection of One School in Step 3

<u>COLUMN</u>	<u>COLUMN</u>	<u>COLUMN</u>
<u>A</u>	<u>B</u>	<u>C</u>
3	98	452
8	33	419
7	80	963
1	79	719
5	18	981
4	74	775
6	54	809
9	11	520
2	48	312
	69	328
	10	519
	90	209
	73	662
	75	785
	54	616
		113
		440
		471
		100
		957

GO TO THE QUESTIONS ABOUT
THE SELECTED SCHOOL

STEP 4

To select one elementary (secondary) school you must first count up the number of elementary (secondary) schools in your SFA. Call this number N.

- If N is less than 10 use the random numbers in Column A.
- If N is between 10 and 99 use the random numbers in Column B.
- If N is 100 or greater use the random numbers in Column C.

Go to the top of the column you are using and circle the first random number that is not greater than N. Call this number R.

Go to the list of schools in your SFA and count from the beginning to the "Rth" elementary (secondary) school. This is the selected school.

STEP 4 EXAMPLE:

Let us say the instructions tell you to select one elementary school out of N=37 in your SFA. You would go to column B and, starting at the top, locate the first random number that is not greater than 37. Looking at column B the first random number not greater than 37 is R=33. You would then go to the list of your elementary schools and count down to the 33rd elementary school on the list. This would be the selected school. If you only have a combined list of elementary and secondary schools you would count down to the 33rd elementary school on that list. You would not count any secondary schools on the list.

Other Information

When the interviewer contacts you they will ask for the total number of elementary schools in your SFA if you selected an elementary school or the total number of secondary schools in your SFA if you selected a secondary school. They will also ask for the total number of schools (secondary and elementary).

Random Numbers for Selection of One School in Step 4

<u>COLUMN</u>	<u>COLUMN</u>	<u>COLUMN</u>
<u>A</u>	<u>B</u>	<u>C</u>
3	98	452
8	33	419
7	80	963
1	79	719
5	18	981
4	74	775
6	54	809
9	11	520
2	48	312
	69	328
	10	519
	90	209
	73	662
	75	785
	54	616
		113
		440
		471
		100
		957

Questions About the Selected School

You may need to contact the school principal or some other school-level staff member in order to answer some of the following questions.

M13. Does the selected school qualify for the "severe need" payment in the School Breakfast Program?

Yes.....1
No.....2
Not in SBP.....3

M14. What grades are served by the selected school?

K or below	_____	3	_____	6	_____	9	_____
1	_____	4	_____	7	_____	10	_____
2	_____	5	_____	8	_____	11	_____
						12	_____

M15. What was the selected school's enrollment as of October 1, 1988?

_____ students

M16. Now we would like to know how many of the children enrolled are potential participants in the NSLP or SBP. So, for example, you should exclude kindergarteners who do not have the opportunity to each lunch or breakfast.

_____ potential NSLP participants
_____ potential SBP participants

M17. How many students were approved for free meals by October 31 of this current school year? How many were approved for reduced-price meals?

_____ free students
_____ reduced-price students

M18. How many free lunches were served during October 1988?

_____ free lunches

M19. How many reduced-price lunches were served during October 1988?

_____ reduced-price lunches

APPENDIX F

**NON-RESPONSE ANALYSIS FOR THE YEAR ONE
SFA MANAGER TELEPHONE SURVEY**

M20. How many free breakfasts were served during October 1988?

_____ free breakfasts

M21. How many reduced-price breakfasts were served during October 1988?

_____ reduced-price breakfasts

M22. How many days did the selected school serve lunch during October 1988?

_____ days

M22(a). How many days did the selected school serve breakfast during October 1988?

_____ days

M23. How does the selected school account for the number of meals served to children who receive free meals, children who pay reduced-price, and children who pay full-price?

	<u>Yes</u>	<u>No</u>
Cashiers have lists of children in each category	1	2
Tickets are coded to reflect the child's status	1	2
Categorical count by classroom teacher in the morning	1	2
Categorical count by classroom teacher that is verified at the point of service	1	2
Scanners for ID cards	1	2
Other (please specify)	1	2

M24. Does anyone (e.g. a cashier) check to see whether each child has taken the required items that comprise a reimbursable meal?

Yes.....1
No (GO TO Q.M25.).....2

M24(a). If a child comes to the point of service (e.g. cashier) and does not have sufficient components of a reimbursable meal, what is done? (READ LIST, CIRCLE ONE)

- Count it as a reimbursable meal.....1
- Tell the child to go back and pick up the missing item(s).....3
- Treat it as an a la carte sale which the child must pay for.....4
- Other (SPECIFY).....5

M25. Does anyone at the school (e.g. the principal) monitor or check to be sure that the number of meals claimed in each category (free, reduced, paid) is accurate?

- Yes.....1
- No (TERMINATE).....2

M26. How often is the monitoring or checking done?

- Daily.....1
- Weekly.....2
- Biweekly.....3
- Monthly.....4
- Bimonthly.....5
- Annually.....6
- Other.....7

M31(a). What kind of monitoring or checking is done?

TELEPHONE SURVEY NON-RESPONSE ANALYSIS (YEAR ONE)

An analysis of possible non-response bias was conducted to determine the extent to which SFAs which responded to the Year One SFA Manager Telephone Survey were systematically different from non-responding SFAs. To do this the 1,407 SFAs that completed the telephone survey were compared to the 333 SFAs that did not complete the telephone survey on three background characteristics: (1) SFA enrollment, (2) percent of enrolled children approved for free or reduced-price meals, and (3) participation in the SBP. A discussion of the results of this analysis is presented below. Data for the analysis were obtained from State records for the 1986-87 school year (i.e., the data used to construct the sampling frame).

Enrollment

Because the distributions of enrollment for responding and non-responding SFAs were skewed (many more small, rather than large SFAs), a simple test of the difference of the two mean values was inappropriate. As a result, enrollment was transformed using a logarithmic function, thus generating symmetric, near-normal distributions. A t-test, comparing the means of the transformed version of enrollment indicated that there is a statistically significant difference between the two distributions ($t=3.77$). On average, the non-responding SFAs are smaller than the responding SFAs.

To examine this difference in more detail, Exhibit F.1 classifies SFA enrollment into five ordinal levels. Overall, the response rate to the telephone survey was 81 percent. However, for small SFAs--enrollment less than 1,000--the response rate was only 75 percent. A chi-square test on this contingency table indicated a statistically significant, although relatively weak, relationship between enrollment and response to the telephone survey ($\chi^2 = 19.28$).

To summarize, while there are distributional differences between responders and non-responders that are statistically significant, the substantive nature of the difference--a somewhat lower response rate for small SFAs--does not suggest that there is a large non-response bias.

Participation in SBP

An analysis comparing participation in the SBP for non-responding and responding SFAs revealed that there is no statistically significant differences between the groups ($\chi^2=2.2$).

Percent Free or Reduced-Price

The percent of free or reduced-price children is defined as the proportion of students within an SFA who are approved to receive either free or reduced-price lunches. As with enrollment, a simple t-test of means is

inappropriate because the two distributions are skewed. A t-test of the logarithmically transformed version, yielded no statistically significant difference between responding and non-responding SFAs.

Summary

The analyses presented here examined three characteristics of SFAs that did and did not respond to the Year One SFA Manager telephone survey. The findings are:

- Enrollment - small SFAs had lower response rates than large SFAs.
- Percent free or reduced-price - no statistically significant differences between the two groups.
- SBP participation - no statistically significant differences between the two groups.

In summary, there appears to be a statistically significant difference between responding and non-responding SFAs on one of the three variables in this analysis. However, the magnitude of the enrollment difference is substantively small and is unlikely to cause a serious threat to the results of the study.

Exhibit F.1

Number and Percentage of Responders
and Non-Responders to the Year One
Telephone Survey, by SFA Size

SFA Size (Number of Students)	<u>Non-Responder</u>		<u>Responder</u>		<u>Total</u>	
	#	%	#	%	#	%
1-999	138	25%	413	75%	551	100%
1000-4999	116	17%	582	83%	698	100%
5000-9999	42	17%	212	83%	254	100%
10000-24999	22	14%	137	86%	159	100%
25000 or more	15	19%	63	81%	78	100%
Total N	333	19%	1,407	81%	1,740	100%

Data Source: Year One SFA Manager Telephone Survey and Sampling Frame for the Study

APPENDIX G

NON-RESPONSE ANALYSIS FOR THE YEAR ONE
SFA MANAGER MAIL SURVEY

MAIL SURVEY NON-RESPONSE ANALYSIS (YEAR ONE)

An analysis of possible non-response bias was conducted to compare SFAs that responded to the Year One mail survey (n=1117) with those that did not respond (n=623). Responders and non-responders were compared on three variables used to construct the survey's sampling frame: (1) SFA enrollment, (2) percent of enrolled children qualifying for free or reduced-price meals, and (3) participation in the SBP. A discussion of the analysis for each variable is presented below.

Enrollment

Because the distribution of enrollment for responding and non-responding SFAs were skewed (many more small, rather than large SFAs), a simple test of the difference of the two mean values was inappropriate. As a result, enrollment was transformed using a logarithmic function, generating a symmetric, near-normal distribution. A t-test, comparing the means of the transformed version of enrollment indicated that there is a statistically significant difference between the two distributions (t=4.51). On the average, non-responding SFAs are smaller SFAs than are the responding SFAs, having a mean enrollment of 1,517 vs. 2,203 for responding SFAs.

To examine this difference in more detail, Exhibit G.1 presents information on survey responses for different sizes of SFAs. Overall, the response rate for the mail survey was 64% (1,117 of 1,711). However, the exhibit shows that small SFAs had a lower response rate of 55% while the medium and large SFAs had higher response rates of 68%.

Percent Free or Reduced-Price

This variable is defined as the proportion of students within an SFA who receive either free or reduced price lunch. As with enrollment, a simple means test is inappropriate because the distributions for both responders and non-responders are skewed.

A t-test of the logarithmically transformed variables revealed a small but statistically significant difference between responding and non-responding SFAs (t=4.53). On average, non-responding SFAs have a higher percentage of free or reduced-price children than do responding SFAs, 23.5% vs. 19.0%.

It is useful to examine participation rates for several levels of free or reduced-price, as is shown in Exhibit G.2. In general, SFAs with a high percentage of free or reduced-price children have lower response rates to the mail survey.

Participation in SBP

Exhibit G.3 presents the response rates for SFAs that only the NSLP and for those SFAs that offer both the NSLP

Exhibit G.1

Number and Percentage of Responders
and Non-Responders to the Year One Mail Survey
by SFA Size

SFA Size (Number of Students)	Non-Responder		Responder		Total	
	#	%	#	%	#	%
1-999	246	45%	299	55%	545	100%
1000-4999	219	32	476	68	695	100
5000 or more	158	32	342	68	500	100
Total N	623	36	1,117	64	1,740	100

Data Source: Year One SFA Manager Mail Survey and Sampling Frame for the Study

Exhibit G.2

Number and Percentage of Responders
and Non-Responders to the
Year One Mail Survey,
by Percent Free or Reduced

Percent Free or Reduced	Non-Responder		Responder		Total	
	#	%	#	%	#	%
0-9.9%	115	30%	263	70%	378	100%
10-19.9%	138	32	289	68	427	100
20-49.9%	208	35	378	65	586	100
50% or more	162	46	187	54	349	100
Total N	623	36	1,117	64	1,740	100

Data Source: Year One SFA Manager Mail Survey and Sampling Frame for the Study

Exhibit G.3

Number and Percentage of Responders
and Non-Responders to the Year One
Mail Survey, by SBP Participation

SBP Participation	Non-Responder		Responder		Total	
	#	%	#	%	#	%
NSLP only	335	33%	691	67%	1,026	100%
NSLP + SBP	288	40	426	60	714	100
Total N	623	36	1,117	64%	1,740	100

Data Source: Year One SFA Manager Mail Survey and Sampling Frame for the Study

and SBP. For both groups, the response rate is not substantially different from the overall response rate of 64%. For SFAs that offer lunch only, the response rate was 67%, and for SFAs that offer breakfast as well as lunch, the response rate was 60%. Each rate is within several percentage points of the overall rate not sufficiently different to suggest non-response bias.

To further investigate the relationship between SBP participation and response rate, a two-by two chi-square analysis was conducted. The analysis revealed that there is a statistically significant although weak relationship between SBP participation and response rate ($X^2=10.49$). Although the X^2 value indicates that the two variables are not completely independent, the low value of the phi-statistic ($\phi=.08$, which can be viewed as a correlation coefficient) indicates that the relationship is quite weak and hence has little, if any, substantive meaning. There is no strong evidence of a substantively important non-response bias with regard to response rates and participation in the SBP.

Summary

In summary, an examination of the relationship between response rates and SFA enrollment, percent of free or reduced-price children, and SBP participation, supports the conclusion that there is a statistically significant response bias problem. Further, the size of the differences between responding and non-responding SFAs is not trivial. The sample weighting adjustments described in Appendix H work to counteract and compensate for this bias.

APPENDIX H
SAMPLE WEIGHTING METHODOLOGY

SAMPLE WEIGHTING METHODOLOGY

This appendix describes the procedures used to calculate the sampling weights that are used to extrapolate sample data to the population of all SFAs in the Nation. The calculation of sampling weights is a multi-stage process involving the following steps which are done separately for the telephone survey and the mail survey:

Public SFAs

- Assign each public SFA an initial sampling weight equal to the reciprocal of its two-stage selection probability.
- Ratio-adjust the weights of public SFAs for nonresponse based on counts of total approved applicants, separately for self-representing (large) and non-self-representing (smaller) SFAs.
- Ratio-adjust the weights of public SFAs to match the count of all public SFAs in the Nation.
- Truncate the weights of outlying SFAs to reduce their contribution to the total.

Private SFAs

- Follow the same steps as for public SFAs.

All SFAs

- Ratio-adjust the weights of all SFAs so that the weighted count of total lunches served matches FNS' universe count in total and separately for high-poverty and low-poverty SFAs.

These weighting procedures not only allow extrapolation from the sample SFAs to the Nation as a whole, but to the extent possible, they also correct for nonresponse bias in the surveys. As was seen in Appendices F and G, there is a nonresponse bias in both the mail and telephone surveys such that nonresponding SFAs tend to be smaller than responding SFAs. The mail survey has a further bias in that nonresponding SFAs have a higher percentage of

children approved for free or reduced-price meals (higher poverty level) than responding SFAs.

The weighting procedures specifically correct for the nonresponse bias due to SFA size and for poverty level in that separate weight adjustments are done for self-representing vs. non-self-representing SFAs and for low-poverty vs. high-poverty SFAs. Self-representing SFAs were included in the sample with certainty (selection probability = 1.0) and are large SFAs. Non-self-representing SFAs are all other (non-large) SFAs.

WEIGHTS FOR SFAs RESPONDING TO THE TELEPHONE SURVEY

Each sample SFA was assigned an initial sampling weight equal to the reciprocal of its two-stage selection probability. The basic sampling weight was then adjusted for survey non-response.

Nonresponse Adjustment: Public SFAs

Public SFAs were first divided into two weighting classes--self-representing public SFAs (selection probability of PSU=1.0 and selection probability of SFA within PSU=1.0), and non-self-representing public SFAs. The basic SFA weights of the 253 responding self-representing public SFAs were multiplied by 1.1145, the ratio of the weighted count of total approved applicants for all 308 sample self-representing SFAs to the weighted count for the 253 responding SFAs. The total approved applicant variable referred to here is the SY 1986-87 data reported by the States to FNS for SFAs in the selected sample of 80 PSUs.

The basic SFA weights of the responding non-self-representing public SFAs were also ratio-adjusted in a similar manner. For this class of SFAs, the ratio equalled 1.1830.

After this initial adjustment for nonresponse, the weighted count of public SFAs equalled 10,414 and the weighted count of total approved applicants equalled 10,721,788. This weighted total of SFAs is lower than the figure of 15,715 public school districts cited in the Digest of Educational Statistics. Therefore, the weights of the non-self-representing public SFAs were further ratio-adjusted by the factor 1.8020 to bring the weighted count of public SFAs up to 15,715. This yielded a weighted total of approved NSLP applicants of 14,871,058.

The next step in the weighting process involved examining the distributions of the sampling weights and of the weighted counts of approved NSLP applicants. The latter distribution indicated that a small number of public SFAs were contributing disproportionately to the weighted count of 14,871,058 total approved applicants due to their high SFA weight value. The SFA weight of these SFAs was, therefore, truncated to the weight value representing the 95th percentile to the SFA weight distribution, in order to reduce the contribution of these SFAs to the overall total. After truncation, the weighted count of public SFAs declined to 13,993, while the weighted count of total approved applicants declined to 13,521,137.

Nonresponse Adjustment:
Private SFAs

The weighting methodology for private SFAs responding to the telephone survey followed the same steps that were used for public SFAs. The only difference is that the weights were initially adjusted so that the weighted count of private SFAs equalled 4,274, the FNS estimate of the number of private SFAs in the U.S. At that point, the weighted count of total approved applicants in private SFAs equalled 235,812.

After examining the distributions of the SFA sampling weights and of the total approved applicants, private SFAs with a high values had their SFA weight truncated to the 90th percentile of the SFA weight distribution. The 90th percentile was selected as the truncation point because the smaller sample size of private SFAs was subject to more weight variability in terms of total approved applicants. This yielded a weighted count of 4,065 private SFAs, and a weighted count of 230,323 approved applicants.

A further adjustment was made to the telephone weights of public and private SFAs; however, the weighting procedures for SFAs which completed the mail survey must first be described.

WEIGHTS FOR SFAs RESPONDING TO THE MAIL SURVEY

The weights for the 977 public SFAs and 136 private SFAs that responded to the mail survey (total of 1,113) were initially derived in the same manner as the weights for the SFAs responding to the telephone survey. The weighted count of free lunches, reduced-price lunches and paid lunches as reported on the SFA mail survey were all found to be higher than universe counts available from FNS secondary data sources. The magnitude of the difference

varied by meal type: +11 percent for free lunches, +22% for reduced lunches, and +34 percent for paid lunches. It was important to have the weighted lunch count agree with the FNS universe count.

Although the total weighted lunch count was higher than the FNS count by 24 percent, the difference varied significantly by SFA poverty status. For SFAs with less than 60 percent of total lunches free and reduced, the difference was +38 percent. On the other hand, for high poverty SFAs, those with 60 percent or more of total lunches free and reduced, the difference was -5 percent. The underrepresentation of high-poverty SFA lunches was caused by a lower response rate among this class of SFAs. (See Appendix G for a discussion of nonresponse for the Year One SFA Manager Mail Survey.) Fortunately, FNS secondary data reports total lunches for both low- and high-poverty SFAs:

	<u>Total Lunches</u>
Low-Poverty SFAs	2,676,271,535
High-Poverty SFAs	<u>1,324,134,347</u>
	4,000,405,882

The mail SFA weights for low- and high-poverty SFAs were separately ratio-adjusted to equal the FNS universe counts. After this adjustment the weighted count of free, reduced and paid lunches were all within 2 percent of the FNS universe counts. This final weight adjustment lowered the weighted count of total SFAs to 14,379. Weighted counts for key domains are shown in Exhibit H.1.

In addition to lunch counts, the FNS secondary data also provides the universe count of total breakfasts. For those analyses that include only SFAs that offer the SBP, it was desirable to have the weighted count of breakfasts in agreement with the FNS count. The mail SFA weights for all SFAs that offer the SBP were therefore ratio-adjusted to equal the FNS count of 604,900,000 breakfasts. This separate set of weights was used for those analyses involving only SFAs that offer the SBP.

FINAL WEIGHT ADJUSTMENTS FOR SFAs RESPONDING TO THE TELEPHONE SURVEY

The telephone SFA sample does not include meal count data for all SFAs because this question was included only in the mail survey. It was, therefore, not

Exhibit H.1

Weighted Counts for Key Population Domains
in Year One SFA Manager Survey

SFA Subgroups	Estimated Number of SFAs ¹		Estimated Total Approved Applicants as Reported in the Survey	
	Number	Percent	Number	Percent
<u>Type of SFA</u>				
Public	11,288	78.5	12,569,265	98.5
Private	3,091	21.5	188,522	1.5
<u>Poverty Level of SFA</u>				
High Poverty	2,267	15.8	6,983,449	54.7
Low Poverty	12,112	84.2	5,774,348	45.3
<u>Participation in SBP</u>				
NSLP and SBP	3,867	26.9	9,535,407	74.7
NSLP Only	10,512	73.1	222,390	25.3
Total Sample	14,379	100.0	12,757,798	100.0

¹These figures differ very slightly from the final numbers included in the report because a few cases were excluded during analysis.

possible to make a meal count adjustment to the telephone survey which would be identical to that used for the mail survey. Consequently, an alternative approach of adjusting the telephone SFA sample to agree with the mail SFA sample in terms of total public and private SFAs was used.

SCHOOL-LEVEL WEIGHTS

Each SFA that selected one sample school and provided data on that school received a school-level weight. School-level weights were calculated by multiplying the SFA weights by appropriate factors so that the count of schools approximates National totals. The weight calculation procedure depended on the amount of information the SFA provided.

Recall from Appendix B that only one school from each public SFA was sampled (private SFAs were not included in this part of the study). If an SFA only had elementary schools, one of those was randomly chosen. If an SFA only had secondary schools, one of those was randomly chosen. If an SFA had both elementary and secondary schools, we decided (randomly) which type of school should be chosen for that SFA.

To calculate school-level weights we needed to know the number of elementary and secondary schools in each SFA. There were 603 SFAs that provided a count of elementary and secondary schools. If the SFA had one or more elementary schools and one or more secondary schools, the mail survey SFA weight was multiplied by two. Then, if the sample school was an elementary school the mail SFA weight was also multiplied by the number of elementary schools in the SFA; and if the sample school was a secondary school, the weight was multiplied by the number of secondary schools in the SFA.

There were an additional 47 SFAs that selected a school but only provided the total count of schools in the SFA. To estimate the number of elementary and secondary schools in these SFAs, the total count of schools for each of these 47 SFAs was split between elementary and secondary schools using the secondary/elementary school distribution among the above 603 SFAs. The mail survey SFA weight for the 47 SFAs was then adjusted using the methods described above for the 603 SFAs.

Not all responding mail survey SFAs sampled a school. To calculate a National total, the SFA weights of the 650 SFAs that sampled a school were multiplied by the ratio of the sum of the SFA weights for all mail SFAs to the sum of the SFA weights for all 650 SFAs. This final adjustment yielded a weight for each sample school. The weighted count of public schools is shown below:

Elementary	80,736
Secondary	<u>34,501</u>
Total	115,237

This count is greater than the number of public schools cited in the Digest of Educational Statistics (1989). That source estimates 59,311 elementary schools and 20,758 secondary schools, for a total of 82,248 public schools. The difference in the magnitude of the estimates is not unexpected given the fact that this study only sampled one school per SFA.

APPENDIX I
METHODOLOGY FOR ESTIMATING
LUNCH EQUIVALENTS

LUNCH EQUIVALENT METHODOLOGY

Because most school food services produce outputs (e.g., breakfasts, a la carte meals) in addition to pattern lunches, the average cost of a lunch is not well-defined. A resolution of this problem that has fairly recently come to be accepted as the standard approach is the definition of a "composite output", containing specified proportions of all the outputs. The most common practice is to use the mean proportions of all outputs in defining the composite output. The cost of this composite output is termed "ray average cost" (RAC); its variation with output provides a measure of economies of scale. The Department of Agriculture, however, has particular concern for just one output, the pattern lunch. An alternative to RAC that takes lunches, rather than a composite, as its point of departure is therefore of greater interest in this context.

In 1985, analysts at Abt Associates defined a measure of "lunch equivalents" (LEQs) as a means of expressing the relationship between SFA costs and lunches served.^{1/} This measure produces reasonable results, but its derivation is difficult to understand. Further, it is possible that the underlying relationship between lunches, breakfasts, and a la carte sales has changed over the past half-dozen years. Therefore, the present study estimated a new measure, which is termed LEQ2 in this appendix, to differentiate it from its predecessor (LEQ1). It is defined as the number of lunches necessary to generate an expected cost equal to the expected cost of the SFA's actual number of lunches, breakfasts, and other items.

This measure relies, as did LEQ1, on an estimated cost function for SFAs. If the true cost function is written as:

$$(1) \text{ Cost } _i = f(L_i, B_i, A_i)$$

where L represents total lunches served, B represents total breakfasts served and A represents a la carte sales in dollars by SFA i, then LEQ2 for the SFA is defined by the identity:

^{1/}Glantz, F.B. and R.G. St.Pierre. Evaluation of Alternatives to Commodity Donation in the National School Lunch Program: Study of Food Acquisitions, Volume 2. Cambridge, MA: Abt Associates Inc., 1985.

$$(2) f(\text{LEQ2}_i, 0, 0) = f(L_i, B_i, A_i).$$

Defining LEQ2 is thus a fairly simple matter once the requisite cost function has been estimated.

A Cost Function for SFAs

Three distinct cost functions were estimated using 1180 observations for which complete cost data are available from the Year Two SFA Manager survey (for SY 1988-89). Each of the three was used in turn to predict total cost for SFAs for Year One (SY 1987-88). The specification exhibiting the smallest mean square prediction error was chosen as the basis for the construction of LEQ2.^{1/} OLS estimates of the chosen cost function are presented in Exhibit I.1

The estimated form of this model was used to construct LEQ2 for each SFA, as defined by equation (2), above. That is, each SFA's actual number of lunches, breakfasts, and dollars of a la carte revenue were entered in the general model, which was solved for the expected cost for that SFA. Using the SFA's expected cost and setting the number of breakfasts and a la carte items equal to zero, the equation was then solved for LEQ2 (i.e., the number of lunches that would yield the same expected cost). In practice then, solving for LEQ2 required simple application of the quadratic formula to the following equation (recalling that E[COST] is known) for each SFA.^{2/}

$$E[\text{COST}] = 5,296 + 1.69 \cdot \text{LEQ2} + 7.2 \times 10^{-9} \cdot \text{LEQ2}^2$$

The unweighted cost per LEQ2 was computed for each SFA. The distribution of each is described below. Note that "reasonable" values are generated throughout the empirical distribution of cost per lunch equivalent.

	<u>Unweighted Cost Per LEQ2</u>
Mean	1.57
Median	1.53
10th Percentile	0.99
25th Percentile	1.28
75th Percentile	1.80
90th Percentile	2.17

^{1/}The mean squared prediction error for the selected cost function was substantially lower than that of the other two specifications, so that the choice of a "preferred" model was clear.

^{2/}Note that a negative root is always discarded.

The estimated model can be used to solve for the conversion of breakfasts to lunches. Setting the total differential of the cost function to zero, we solve for dLUNCH/dBREAKFAST as

$$dC = 1.71dL + 14.4 \times 10^{-9} \cdot L \cdot dL + 0.40dB - 6.6 \times 10^{-9} \cdot B \cdot dB$$

This assumes that d(OTHREV) is set to zero and that the SFA is producing breakfasts so YBRK=1.

Solving for dL/dB:

$$dL/dB = -[0.4 + 6.6 \times 10^{-9} \cdot B] / [1.71 + 14.4 \times 10^{-9} \cdot L]$$

If L and B are both zero, this figure turns out to be 0.23 (a lunch is worth just over 4 breakfasts). If L is set to 819,000 and B is set to 151,000 (their mean values), then dL/dB (expressed to two decimal places) is still 0.23. Hence, the conversion of breakfasts to lunches can, for all practical purposes, be treated as a constant.

Variables included in the final cost function are listed below:

Variable	Mean	Definition
LMEALS	818,887	Number of lunches served
BMEALS	151,386	Number of breakfasts served
OTHREV <u>1</u> /	230,191	Revenue from other cafeteria sales (primarily a la carte items or adult meals)
YBRK	0.46	=1 if BMEALS > 0; 0 otherwise

Coefficient estimates are presented in Exhibit I.1.

1/Properly speaking, the volume or count of individual a la carte items belongs in the cost function. Revenue from these sales does not. It is included here as the only available measure of SFA output other than breakfasts and lunches.

Exhibit I.1

OLS Estimates of SFA Cost Function

Dependent Variable:	Total SFA Cost
Intercept	5,296 (0.1)
LMEALS	1.69* (15.4)
LMEALS ²	7.2x10 ⁻⁹ * (11.8)
BMEALS	0.40* (1.7)
BMEALS ²	3.3x10 ⁻⁸ * (7.2)
OTHREV	1.12* (4.7)
OTHREV ²	-1.8x10 ⁻⁷ * (-5.2)
YBRK	138,028 (1.5)
YBRK · LMEALS	0.019 (0.2)
YBRK · OTHREV	0.38 (1.4)
R ²	0.98
N	1180

*Statistically significant at the .10 level.

Note: t - statistics appear in parentheses.