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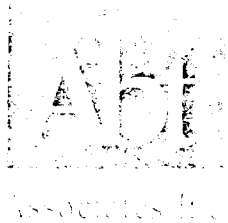
Child Nutrition Program Operations Study

Third Year Report



CHILD NUTRITION PROGRAM OPERATIONS STUDY:
Third Year Report

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ACKNOWLEDGEMENTS

The Child Nutrition Program Operations Study is a large long-term undertaking which requires the ongoing cooperation of food service personnel in school districts across the country and of program administrators in all States. Special thanks are due to all of the School Food Service Managers, State Child Nutrition Directors, State Distributing Agents, and other personnel who have helped with this study.

Members of the Education Information Advisory Committee (EIAC), Food and Nutrition Service Subcommittee, of the Council of Chief State School Officers, spent substantial time and effort reviewing instruments for this study and discussing study plans with school and state personnel. EIAC members included John Raftery from the Massachusetts State Department of Education, Tom Freeman from the Oklahoma State Department of Education and Kathy Kuser from the New Jersey Department of Education.

In its design phases, the study was also assisted by an Advisory Panel consisting of several experts. These persons included Susan Gilroy, School Food Service Manager from the San Diego Unified Schools, Jack Fowler, a sampling statistician from the University of Massachusetts, Jack Nelson, State Distributing Agent from Virginia, and John Raftery, State Child Nutrition Director from Massachusetts.

Staff of the Office of Analysis and Education, Food and Nutrition Service, U.S. Department of Agriculture were responsible for oversight of the project. As Project Officer, John Endahl oversaw all planning, implementation, and reporting activities of the study.

Finally, several staff members at Abt Associates Inc. played important roles in the project. Key staff include Robert St.Pierre, Mary Kay Fox, Michael Puma, Frederic Glantz, Jean Layzer, Michael Battaglia, Marc Moss, Ellen Lee, Diane Stoner, Lyria Boast, and Tracy Olcott.

EXECUTIVE SUMMARY

STUDY BACKGROUND

The Child Nutrition Program Operations Study was designed to collect data from States and participating SFAs through annual telephone surveys during School Years (SY) 1988-89, 1989-90, and 1990-91 and through on-site visits during SY 1989-90 and 1991-92, with specific information needs for each data collection effort defined by FNS staff. The surveys provide a "snapshot" of administrative structure and, for selected research items that are included in each of the multiple surveys, an assessment of year-to-year changes in program operations. This report presents findings from the third, and final, year of the study.

FINDINGS

Participation in the NSLP and SBP

FNS has an ongoing interest in measuring and understanding participation in the Child Nutrition Programs because Federal subsidies are tied to the number of meals actually served. This study acquired data on the number of meals served in the NSLP and SBP during SY 1987-88, SY 1988-89, and SY 1898-90, and used these data to compute National estimates of the number of meals served in each program, to calculate student-level participation rates, and to estimate the magnitude of year-to-year changes.

Estimated NSLP Participation. An estimated 4.0 billion lunches were served to school children in SY 1987-88, SY 1988-89, and SY 1989-90. In each of the three years of the study, about 40% of all lunches were served free of charge to children from low-income families, about 7% were served at a reduced price, and about 53% were served to children who paid full price for their lunch.

Estimated SBP Participation. Data from this study show large increases in SBP participation over the last three years. About 604 million breakfasts were served to school children in SY 1987-88, 623 million breakfasts were served in SY 1988-89, and 705 million were served in SY 1989-90. More than 80% of these breakfasts were served free or at a reduced price in each of the three years of the study.

Student Participation Rates. Student participation rates are defined as the ratio of the number of meals served to eligible students during the year to the number of meals that could have been provided. The national estimate for overall NSLP student participation ranges from 58 to 60% across SY1987-88, SY 1988-89, and SY1989-90. That is, on an average day about 58%-60% of the students who had the NSLP available to them actually participated in the program. These estimated participation rates are quite close to estimates of 59%, 58% and 55% based on FNS' statistics for the same three years. There

were no statistically significant changes in overall school lunch participation rates over the three years of this study.

NSLP participation rates were also estimated for children in each income-eligibility category. Participation rates for children qualifying for free meals were 90% in SY 1978-88, 88% in SY 1988-89, and 85% in SY 1989-90. Rates for children qualifying for reduced-price meals were 73%, 71%, and 69% for the three years. And participation rates for children who pay full price for their meals were 46%, 48%, and 46%. The apparent declines in participation rates for children who receive free meals and children who receive reduced-price meals are not statistically significant.

Student participation rates were also calculated for children in SFAs that offer the SBP. The overall rate of participation in the SBP in each of the three years of the study was 21% in SY 1987-88 and in SY 1988-89, and 20% in SY 1989-90. As was the case with NSLP participation rates, these estimates are close to estimates derived from FNS' administrative data. Examined by income eligibility category, SBP participation rates were quite consistent across years, indicating that SBP participation rates were highest for free meals in each year (43%, 42%, and 40%, respectively) and lowest for paid meals (4%, 5%, and 5%).

Accuracy of Reported Meal Counts. In 1990, FNS conducted research into the accuracy of meal counts supplied by schools and reported that schools claim an average of 81 free meals for every 100 approved applications on file. When adjusted for attendance, the claiming ratio rose to 88 percent. Using SFA aggregates, this study examined the patterns of change in claiming ratios over time. The percent of all SFAs that claimed more free meals, on average, than they had applications on file at the beginning of the school year rose from 13 percent in SY 1988-89 to 20 percent in SY 1990-91.

The SFAs most likely to have claims in excess of the number of eligible children tend to be private, small and SFAs that serve large percentages of poor children. These potential overclaimed meals represent a relatively small percentage (1.6%) of the total number of free meals served nationally. It is important to note that this analysis is based on applications approved at the beginning of the school year. To the extent that additional children become eligible for free meals over the course of the school year, this analysis would overstate the ratio of claimed meals to eligible children.

Meal Prices

Previous research has shown that the price charged for an NSLP meal is a primary determinant of student participation decisions. This study acquired data on meal prices for each of three years.

NSLP Meal Prices. The price for a full price NSLP meal, across all schools and SFAs, was 98 cents in SY 1988-89, $1.00 in SY 1989-90, and $1.08 in SY 1990-91. Paid lunch prices vary by grade level. The average lunch price in elementary schools was 93 cents in SY 1988-89, 95 cents in SY 1989-90, and $1.02 in SY 1990-91. For middle/secondary schools, the average price

was $1.03 in SY 1988-89, $1.06 in SY 1989-90, and $1.16 in SY 1990-91. There also is variation in meal pricing in different types of SFAs. Specifically, prices charged in SFAs that participate in the SBP are 9 cents lower than prices charged in SFAs that do not participate in the SBP, and prices charged in SFAs that serve 60 percent or more free or reduced-price lunches are 11 cents lower than prices charged in SFAs that serve 59 percent or fewer free or reduced-price lunches.

Lunch prices increased over the time of this study. The size of the price increases (computations were based only on those SFAs that raised prices) in elementary schools averaged 11 cents from SY 1987-88 to SY 1988-89, 10 cents from SY 1988-89 to SY 1989-90, and 13 cents from SY 1989-90 to SY 1990-91. A similar pattern was observed in middle/ secondary schools, with increases over time of 11 cents, 11 cents, and 15 cents.

The price of a reduced-price lunch is capped at $.40, and each year of the study found that most SFAs charge the maximum, with the average price being $.38 in each year.

SBP Meal Prices. The average price of an SBP paid breakfast increased significantly during this study, from $.49 in SY 1988-89 to $.54 in SY 1990-91. The price of a reduced-price breakfast was $.26 in SY 1988-89 and $.27 in SY 1990-91. For elementary schools, the price increase was statistically significant, rising from $.25 to $.27 across the three years of the study.

The Food Donation Program

The Child Nutrition programs have historically acquired large amounts of surplus agricultural commodities through the FDP. This study obtained data on several aspects of FDP operations in order to help FNS improve program operations.

Processing of Commodity Flour. Almost all SFAs (96%) reported that they received USDA commodity flour in SY1990-91. Most of these (89%) reported that they used all of their commodity flour in-house for preparation of food items in their own kitchens, while 10% sent all of their commodity flour to food processors. About 42% of the SFAs purchased some food items containing commodity flour through National Commodity Processing contracts. It should be noted that schools no longer receive flour as a bonus commodity and therefore flour is no longer a part of National Commodity Processing contracts.

Use of Beef Patties. Over two-thirds (68%) of all SFAs prefer USDA patties over other available patties. Reasons why USDA patties were preferred were that the patties are free, and that USDA patties are perceived as being of higher quality than other types of patties. On the other hand, 19% of all SFAs have a processing agreement for the preparation of hamburger patties. Reasons that commercially-prepared patties were preferred were that the patties taste better and are of higher quality, they are available in precooked form, and they are lower in fat.

SFAs that have a processing agreement for beef patties were asked to list the reasons that they to not order all of their patties from USDA. The main reasons were related to a perceived lack of or unawareness of availability: the State restricts orders, the SFA cannot get enough patties, patties are not offered, and the SFA is unaware that patties are available.

USDA Purchasing Cycles. When asked questions concerning the pattern in which they receive USDA commodities, almost three-quarters of the SFA Managers reported that they were satisfied with the timing of commodity deliveries. However, large SFAs were less likely to be satisfied (52%) than small SFAs (85%). The most common recommendation was to make more deliveries earlier in the school year.

Impact of Changes in Bonus Commodity Donations. SFA Managers were asked questions about the perceived impact of recent changes in the level of bonus commodity donations. Almost all SFAs (88%) reported that reductions in bonus donations had affected their food service operations: 57% noted that they had changed their menus, 42% had increased food costs, 33% used more convenience items, and 24% increase lunch prices. Almost all SFAs reported that they increased commercial food purchases, and that they were now purchasing processed cheese (92%), non-fat dry milk (59%), mozzarella cheese (55%), and honey (9%).

Technical Assistance

Training and technical assistance are used 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.

Nutrient Analyses. About 35% of all SFAs report that they perform a nutritional analysis of their menus. Of these SFAs, most do the analysis by hand; only a small percentage use a computer for the analysis. The most common reasons for not doing a nutritional analysis are related to resource constraints including lack of access to a computer and/or the necessary software, the opinion that such analyses are unimportant, and the perception that following NSLP meal guidelines is sufficient.

National Food Service Management Institute. Most SFAs (70%) were unaware of the existence of the Institute. When provided with a description of the purpose of the Institute, about two-thirds of all SFAs thought that training was the most appropriate role for such an organization, while one-third suggested technology transfer as an important function.

When queried about their needs for training and/or information on topics related to the management of school food service programs, most SFA Managers felt a need for training on most topics, with learning to make better use of USDA donated commodities and implementing the U.S. Dietary Guidelines in school feeding programs heading the list. In general, local workshops are preferred to written materials.

Commercial Food Service Vendors

Increasing numbers of SFAs are contracting with outside vendors to provide some or all of their food service. SFA Managers were asked a series of questions about their relationships with such vendors.

Nearly one-third of all SFA (29%, or about 4,700 SFAs) have been approached by a commercial company offering to provide retailed, prepared, or ready-to-eat foods. Large SFAs, with their increased marked potential, were most likely to have been contacted. National chains such as Pizza Hut, Domino's Pizza, and McDonalds were the most active in terms of contacting SFAs.

After-School Care

FNS has detailed information on the Child and Adult Care Food Program, but has little information on school-based after-school care programs. This survey asked SFA Managers a series of questions designed to obtain basic data. The responses should be regarded with care, as SFA Managers may not be the best respondent for questions about after-school care and might not have been able to supply valid answers to all questions.

A total of 26% of SFAs (about 4,000 SFAs) reported that some schools in the district did have an after-school care program. An estimated 13,625 elementary and 247 middle/secondary schools offer after-school care programs to slightly more than 600,000 children. Most of the participating children are in public elementary schools, in schools which also offer the SBP, in large schools, and in low-poverty schools. Most programs begin between 2:30pm and 3:30pm and last for an average of 3 hours.

Eighty-five percent of SFAs with an after-school care program provide snacks in all participating schools, however, 79% of the SFA Managers reported that no Federal subsidy was received for these snacks. This low rate of receipt of Federal subsidies may reflect a lack of knowledge of the part of SFA Managers. When asked why after-school care programs did not apply for Federal subsidies, SFA Managers listed several reasons including not being sure if the program was eligible or how to apply for the subsidy, the subsidy is not worth applying for, the SFA is considering applying, and the cost of snacks is already covered.

SECTION I
INTRODUCTION

This report presents findings from the third year (Year Three) of the Child Nutrition Program Operations Study (CNOPS). This multi-year study was conducted by Abt Associates Inc. (AAI) of Cambridge, Massachusetts under contract to the Food and Nutrition Service (FNS) of the U.S. Department of Agriculture (USDA).

Section I of the report is an introductory chapter which provides background information on the Child Nutrition Program Operations Study. The purpose and objectives of the study are reviewed as well as the overall design of the study, its component surveys, and the major research issues addressed in Year Three. Data collection strategies are also described. The chapter concludes with a discussion of the approach used in analyzing and reporting data. Additional details on study methodology as well as discussions specific to Years One and Two of the study are contained in the Year One and Year Two reports, respectively.1/

The next several sections present major findings from the Year Three SFA Manager Survey. Section II presents findings related to program participation; Section III focuses on meal prices; Section IV presents information on issues related to the Food Donation Program; Section V presents findings related to technical assistance; Section VI deals with commercial food service vendors; and Section VII focuses on after school care.

Finally, the report contains a variety of appendices including copies of the survey instrument, analysis of non-response bias, and the methodology used in weighting data to produce national estimates.

PURPOSE AND OBJECTIVES OF THE STUDY

Administered by FNS, the school-based Child Nutrition Programs operate in every state in the nation, and represent an annual investment of almost $6

1/St.Pierre, R.G., M.K. Fox, M. Puma, F. Glantz, and M. Moss. Child Nutrition Program Operations Study: First Year Report. Cambridge, MA: Abt Associates Inc., February 1991.

St.Pierre, R.G., M.K. Fox, M. Puma, F. Glantz, and M. Moss. Child Nutrition Program Operations Study: Second Year Report. Cambridge, MA: Abt Associates Inc., June, 1992.

billion of public funds to establish, maintain, and operate non-profit school lunch and breakfast programs for the benefit of the Nation's school children.1/ To manage these programs effectively, FNS collects and analyzes information from State-level management reports. However, State-level management reports do not contain the level of detail required to answer some of the research questions for this study. Further, the State-level reports vary considerably in both format and content, FNS is unable to rely on this data source for all of its information needs.

Consequently, FNS contracted with AAI to conduct a series of three annual surveys of approximately 1,700 SFAs to obtain information on issues that are of interest to FNS. Compared with the alternative of conducting several special-purpose studies, the implementation of an ongoing survey capability reduced FNS' information collection costs, lessened overall respondent burden, and reduced the length of time necessary to obtain required data.

The study had three overall objectives:

1) provide general descriptive information on the characteristics of the school-based Child Nutrition Programs required either for the preparation of program budgets (e.g., the forecasting of program participation and program costs), or to answer commonly asked questions related to issues such as meal costs, student participation, and SFA food service practices;

2) provide data on various aspects of program administration to inform the preparation of program regulations and reporting requirements; and

3) provide data that will support the training and technical assistance needs of SFAs.

In some cases, meeting these three objectives required that information be collected from SFAs or States on an ongoing basis in order to observe changes over time. In other instances, the desire for information was a one-time need where the interest was in describing or assessing a specific aspect of

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1/The school-based Child Nutrition Programs include the National School Lunch Program (NSLP), the School Breakfast Program (SBP), the Food Donation Program (FDP), the Special Milk Program (SMP), and the Nutrition Education and Training Program (NET). State Administrative Expense (SAE) funding is provided for the NSLP, SBP and SMP as well as for the Child and Adult Care Food Program (CACFP).

the Child Nutrition Programs. In either case, the primary goal was to provide FNS with information for specific functions such as budget projections, analysis of legislative options, design of regulations, or the development of technical assistance materials.

STUDY DESIGN

The Child Nutrition Program Operations Study was designed to collect data from States and participating SFAs on issues that were the focus of FNS' policy-making process. Data collection for the study spanned three school years (SY 1988-89, 1989-90, and 1990-91), with specific information needs for each annual survey defined by FNS staff. The surveys provide a "snap-shot" of administrative structure and procedures in a particular year and, for selected research items that were included in each annual survey, an assessment of year-to-year changes in program operations.

Study Components

Three distinct data collection components comprise the Child Nutrition Program Operations Study: (1) State Agency Survey, (2) SFA Manager Surveys, and (3) On-Site Meal Observations. Each of these components is described below. Exhibit I.1 summarizes the data collection schedule.

State Agency Survey. The research issues identified for Year One of the study required that data be collected from every State regarding a variety of issues including commodity processing and distribution, monitoring of commodity inventories, SFA utilization of Food Service Management Companies (FSMCs) and vended meals, and technical assistance and training. To collect this information, Directors of Child Nutrition Programs and State Distributing Agencies in all 50 States were contacted and asked to complete a brief telephone interview. All of these data were collected during Year One of the study; no State Agency questions were included in Years Two or Three of the study.

SFA Manager Surveys. The SFA Manager Surveys represent the largest component of the Child Nutrition Program Operations Study. Three annual surveys of a stratified sample of 1,740 SFAs were conducted, in the spring of each year, to gather data on a wide variety of program operations issues.1/ During Year One of the study, both telephone and mail instruments were utilized in surveying SFA managers because of the amount of historical program data that was requested (e.g., meal prices for previous five school

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1/A detailed description of the stratification and sampling plans used in selecting SFAs is provided in the Year One Report.

Exhibit I.1

Child Nutrition Program Operations Study:
Study Components and Data Collection Schedule

Study Component	Spring 1989 (Year One)	Spring 1990 (Year Two)	Spring 1991 (Year Three)
State Agency Survey	X		
SFA Manager Survey[1]			
- Telephone Survey	X	X	X
- Mail Survey	X		
On-Site Meal Observations		X	

[1]During Year One of the study, both telephone and mail survey instruments were used to collect data from SFA Managers. SFA Manager Surveys for Years Two and Three of the study include only telephone surveys.

years; meal counts, enrollment, etc. for two school years). Data collection from SFA Managers in Years Two and Three of the study was limited to telephone surveys. Specific research issues addressed in the Year Three survey are described later in this section.

On-Site Meal Observations. The objective of the on-site meal observations was to provide FNS with timely information on the food and nutrient content of meals offered to, selected by, and consumed by students participating in the NSLP and SBP. A representative sample of participating students was observed in 20 purposively-selected SFAs during Year Two (SY 1989-90).

Ten of the SFAs were selected because they were considered to have exemplary food service programs in that they had initiated steps to reduce the levels of fat, cholesterol and/or sodium in school meals.1/ Ten additional (non-exemplary or typical) SFAs were selected to roughly match the exemplary SFAs in terms of percentage of NSLP meals served free or at a reduced price, total enrollment, region and kitchen configuration. Five of these typical SFAs participated as grantees in FNS' menu modification demonstration grants program. The remaining five typical SFAs were selected from SFAs participating in the Child Nutrition Program Operations Study.

Year Three Research Issues

Each research issue in the Child Nutrition Program Operations Study is categorized as being either longitudinal or cross-sectional in nature. Longitudinal data were collected during each year of the study, in order to assess year-to-year changes in program operations. Cross-sectional issues, on the other hand, were defined on an annual basis and collected only in the associated annual SFA Manager Survey. The annual SFA Manager Surveys were, therefore, constructed in a modular fashion, with a common set of questions asked in each year of the study (the longitudinal research issues) and separate modules added in individual years to address identified research priorities (the cross-sectional issues).

Research issues for Year Three of the study were identified by FNS. Research priorities and associated survey instruments were also reviewed and approved by members of the Education Information Advisory Committee (EIAC), Food and Nutrition Subcommittee of the Council of Chief State

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1/The 10 exemplary SFAs were selected from a pool of approximately 70 SFAs that were nominated as exemplary by FNS headquarters and Regional Office staff, the American School Food Service Association, and State Child Nutrition Directors.

School Officers. Research issues for Year Three of the Child Nutrition Program Operations Study are summarized in Exhibit I.2.

DATA COLLECTION: YEAR THREE

Data collection for Year Three of the Child Nutrition Program Operations Study consisted of the Year Three SFA Manager Telephone Survey. A copy of the survey instrument is included in Appendix A.

A mailing was prepared for each of the 1,740 SFAs selected for the three-year survey effort. (Each of these SFAs had previously been contacted during the Year One and Year Two data collection). The mailing included a personalized letter that reintroduced the study and solicited SFA participation. It also included a summary of the specific types of historical data to be collected, so that respondents could assemble and organize this material ahead of time. The mailing was sent out about three weeks before telephone interviews were scheduled to begin.

Telephone interviews began in Spring 1991 and continued over a period of two months. At the conclusion of this two-month period, the response rate was not as high as desired, so a strategy was utilized to collect selected data elements for non-responding SFAs from State Agency directors (data requested from State Agencies was limited to longitudinal information, e.g., meal counts). State Agency directors were contacted by mail and asked to supply the requested data for each of the non-responding SFAs in their respective States. AAI staff made numerous follow-up telephone calls to State Agencies to encourage participation.

All cross-sectional data elements were gathered with reference to SY 1990-91, the school year during which the survey took place. SFA managers were able to answer these questions with respect to SFA operations in place for that school year. Some of the longitudinal data elements (e.g., meal prices, number of children approved for free or reduced-price meals) were also asked with reference to the current school year (SY 1990-91). However, some longitudinal data elements (e.g., meal counts, number of operating days) require that end-of-year figures be available, and so these items were gathered with reference to the preceding school year (SY 1989-90).

The initial round of telephone interviews with SFA Managers yielded 1,244 completed interviews for a response rate of 71 percent. An additional 63 partially-complete interviews were obtained from State Agency directors and include key variables such as meal counts, enrollment, and numbers of children approved for free- and reduced-price meals. Thus the longitudinal

Exhibit I.2

Year Three Research Issues

Year Three SFA Manager Survey – Longitudinal Research Issues[1]

Participation

- Overall, free, reduced and paid NSLP participation rates (separately for elementary and middle/secondary schools) in SY 1989-90; change from SY 1987-88 to SY 1989-90
- Overall, free, reduced and paid SBP participation rates (separately for elementary and middle/secondary schools) in SY 1989-90; change from SY 1987-88 to SY 1989-90
- Accuracy of reported meal counts

Meal Prices

- Average prices charged for full, reduced and adult lunches in SY 1990-91
- Average prices charged for full, reduced and adult breakfasts in SY 1990-91
- Change in meal prices over time: SY 1987-88 to SY 1989-90 and SY 1983-84 through SY 1989-90

Year Three SFA Manager Survey – Cross-Sectional Research Issues[2]

Food Donation Program

Direct Delivery of Commodities

- Prevalence and frequency
- Receipt of written notification
- Delivery appointments

Use of Commodity Flour

- Amount of flour used internally and externally
- Products made with donated flour, internally and externally
- Use of flour in NCP contracts

Use of Beef Patties

- Use of beef processing contracts
- Awareness of USDA-shipped patties
- Preferences for sources and reasons

Buying Cycles

- Pattern of commodity shipment
- Satisfaction with current timing and recommended changes

Changes in Bonus Commodity Donations

- Effect of reduced dairy donations on school food service

[1]Longitudinal research issues were included in the Year One SFA Manager Mail Survey as well as the Year Two and Year Three SFA Manager Telephone Surveys.
[2]Year Three cross-sectional research issues were included only in the Year Three SFA Manager Telephone Survey.

Exhibit I.2

Year Three Research Issues
(continued)

Year Three SFA Manager Survey -- Cross-Sectional Research Issues[2] (cont'd.)

Technical Assistance

Nutritional Analysis of Menus

- -- Prevalence of nutritional analysis
- -- Who does analysis and how
- -- Use of computerized systems
- -- Effect of analysis on menu planning
- -- Nutrients examined
- -- References used for nutritional goals
- -- Preferences for nutritional analysis or meal pattern requirements for menu planning

Food Service Management Institute

- -- Awareness of FSMI
- -- SFA needs for training: topics, format, location

Other Issues

Commercial Food Service Vendors

- -- Prevalence of contract by commercial vendors
- -- Prevalence of use and how used
- -- Use of competitive bidding

After-School Care

- -- Prevalence of after school care
- -- Sponsoring organization
- -- Number of schools and children involved
- -- Hours of operation
- -- Requirements imposed
- -- Prevalence of provision of meal service
- -- Procedures used to provide meal service
- -- Relationship to NSLP, SBP, CACFP
- -- Prices charged

[2]Year Three cross-sectional research issues were included only in the Year Three SFA Manager Telephone Survey.

data set included a total of 1,307 cases, while the cross-sectional data set included 1,244. Non-response analyses are presented in Appendix B.

DATA ANALYSIS AND REPORTING: YEAR THREE

The following section briefly describes the methodology used to weight the survey sample data to the national level and the general approach used in analyzing data from the Year Three SFA Manager Survey.

Weighting Methodology

The Year Three SFA sample was weighted so that inferences could be drawn regarding the universe of all participating SFAs in the U.S. As previously described, the Year Three sample has two major components (longitudinal data elements and cross-sectional data elements) and each was weighted separately. The first component consists of the 1,307 SFAs that provided answers to the longitudinal questions. Longitudinal questions are those included in the Year One, Year Two, and Year Three surveys. The second component consists of the 1,244 SFAs that provided answers to the cross-sectional questions. Cross-sectional questions are those that are only included in the Year Three survey. The number of SFAs providing longitudinal data is greater than the number that provided cross-sectional data, because selected longitudinal data elements were retrieved from State records for some of the SFAs that did not respond to the survey.

The weighting methodology involved adjustments to the reciprocal of the selection probability of each responding SFA. These adjustments compensate for SFA non-response (see Appendix B). Additional adjustments were made to bring the weighted meal counts in the sample into agreement with FNS universe counts. Exhibits I.3 and I.4 summarize weighted and unweighted sample sizes for the Year One, Year Two, and Year Three longitudinal data set as well as the Year Three cross-sectional data set. Details of the weighting methodology are presented in Appendix C.

Examining Exhibit I.4 shows that the weighted number of SFAs differs across years. This is attributable to the fact that each year's weights were adjusted so that the weighted total lunch counts from this project agree with FNS' universe counts derived from State reports. Making this adjustment means that it is not possible for other weighted totals to agree with known population values (i.e., the number of SFAs in the country). This is the correct approach for the present study, since the key issue for FNS is to have the data weighted by meal counts rather than by number of SFAs.

Exhibit I.3

Unweighted and Weighted Sample Sizes for Longitudinal Data Elements

	Year One (SY 1987-88)			Year Two (SY 1988-89)			Year Three (SY 1989-90)		
	Unweighted N	Weighted N[1]	Percent (of Weighted N)	Unweighted N	Weighted N[1]	Percent (of Weighted N)	Unweighted N	Weighted N[1]	Percent (of Weighted N)
TOTAL SAMPLE	1,113	14,375	100%	1,222	12,834	100%	1,307	14,158	100%
Type of SFA									
Public	977	11,284	78.5	1,110	10,161	79.2	1,171	11,119	78.5
Private	136	3,091	21.5	112	2,673	20.8	136	3,039	21.5
Participation in SBP									
NSLP and SBP	427	3,867	26.9	553	4,274	33.3	618	5,265	37.2
NSLP only	686	10,508	73.1	669	8,559	66.7	689	8,893	62.8
SFA Size									
Small (1-999)	294	7,067	49.1	274	5,897	46.0	323	7,012	49.5
Medium (1,000-4,999)	475	5,464	38.0	529	5,103	39.8	553	5,161	36.5
Large (5,000+)	344	1,844	12.9	419	1,834	14.3	431	1,985	14.0
SFA Poverty Level									
60% or more F&R	258	2,267	15.8	288	2,472	19.3	277	2,489	17.6
0-59% F&R	855	12,108	84.2	934	10,362	80.7	1,030	11,669	82.4

[1]The weighted number of SFAs is unequal in the two years because the sample was weighted to bring total lunch counts into agreement with FNS' known population totals.

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

Exhibit I.4

Unweighted and Weighted Sample Sizes for Year Three Cross-Sectional Data Elements (SY 1990-91)

	Unweighted N	Weighted N	Percent (of Weighted N)
TOTAL SAMPLE	1,244	16,279	100%
Type of SFA			
Public	1,115	12,898	79
Private	129	3,381	21
Participation in SBP			
NSLP and SBP	580	5,548	34
NSLP only	664	10,731	66
SFA Size			
Small (1-999)	313	7,945	49
Medium (1,000-4,999)	523	5,984	37
Large (5,000+)	408	2,349	14
SFA Poverty Level			
60% or more F&R	268	2,016	12
0-59% F&R	987	14,263	88

Data Source: Year Three SFA Manager Survey.

General Analytic Approach

Analysis of the data collected from the SFA Manager Survey consisted of straightforward crosstabulations of responses to the survey questions with accompanying descriptive statistics.1/

Cross-Sectional Data. The cross-sectional data elements included in the SFA Manager Survey represented one-time information needs identified by FNS. These data covered some aspect of program operations or a particular area of technical assistance. Analysis of the cross-sectional data was, therefore, descriptive in nature, providing FNS with a "snapshot" of the operational issues examined in the survey. Responses for each survey item were tabulated and appropriate descriptive statistics are presented. When appropriate, verbatim quotations from the open-ended responses were used (without attribution) to illustrate trends and patterns in the data.

T-tests were performed for selected variables to assess the statistical significance of differences between subgroups of SFAs. Rather than assuming that the study sample is a simple random sample of SFAs, the t-statistics were adjusted to reflect the design effects associated with the use of a complex, stratified cluster sample.

Longitudinal Data. The longitudinal data elements represent FNS' ongoing information needs for purposes of budget forecasting and policy analysis. The longitudinal data set includes meal prices, information on meal counts, enrollment and attendance data and other key variables that define important aspects of program participation.

A key analytic issue was which SFAs to include in the longitudinal data set. For Year One, all SFAs with valid data were accepted into the longitudinal data set (1,117 SFAs). To be included in the longitudinal data set an SFA had to have valid data for at least the following variables which were necessary to compute student participation rates and lunch equivalents (LEQ), a central variable in the meal cost analysis:

- count of free lunches
- count of reduced-price lunches
- count of paid lunches
- count of total lunches
- count of children approved for free lunches
- count of children approved for reduced-price lunches
- count of enrolled children

1/Methods used to derive more complex variables, such as participation rates and meal costs, are described in the appropriate section of this report.

The same decision rules were used for the Year Two and Year Three data set, yielding 1,222 cases with valid longitudinal data for Year Two and 1,307 cases with valid data for Year Three. The approach used to conduct the longitudinal analysis was to use all valid SFAs obtained in each annual survey. In effect, this approach views the three surveys as independent samples from the same population, and yielded 1,117 SFAs for Year One, 1,222 SFAs for Year Two, and 1,307 SFAs for Year Three.

The main advantage of this approach is that all of the available data are used for each year. This is a substantial advantage because there are relatively large numbers of SFAs that responded in one year but not in the other.

The main disadvantage of this approach is that while it allows comparisons of group means from year to year, it does not allow evaluation of changes experienced by individual SFAs, because the data files contain different cases.

While the inability to look at year-to-year changes on a case-by-case basis is a disadvantage, the Year Two report showed that there were few large (statistically significant and substantively important in absolute terms) year-to-year changes in the key measures being examined for this study: participation rates, meal prices. Therefore, examining year-to-year changes on a case-by-case basis is unlikely to be of great concern.

The analysis of the longitudinal data consisted of tabulation and presentation of descriptive statistics for each variable for each of the three years. Crosstabulations similar to those described for the cross-sectional data were prepared. Two sets of t-tests were performed: (1) t-tests to assess the significance of the differences between subgroups for Year One, e.g., to compare public SFAs with private SFAs, and (2) t-tests to assess the significance of the differences from subgroup to subgroup across years, e.g., to compare public SFAs in Year One with public SFAs in Year Three. To simplify the findings, no significance tests were done to assess the differences between subgroups for Years Two or Three.

Tabular Presentations

In presenting the data, simple tabular displays are employed. Overall national estimates are included as well as subgroup estimates for each of the specific domains of the population considered in selecting the SFA sample:

- Public SFAs
- Private SFAs
- SFAs that participate in both the NSLP and SBP1/
- SFAs that participate in the NSLP only

1/SFAs that participate in the SBP need not have all schools participating.

- SFAs that serve 60 percent or more free or reduced-price lunches
- SFAs that serve 59 percent or fewer free or reduced-price lunches

In addition, to allow examination of variation associated with the size of an SFA, a categorical variable was created to define small, medium and large SFAs, based on the following ranges of total student enrollment:

- Small : 1 to 999 students
- Medium: 1,000 to 4,999 students
- Large : 5,000 or more students

For the most part, summary exhibits for each research issue include descriptive statistics for each of these SFA subgroups. For some variables, however, where little difference was noted among the various SFA subgroups, summary exhibits present data only for the full, combined sample.

Key exhibits present results of t-tests which compare subgroups of SFAs, i.e., public vs. private, NSLP-only vs. NSLP and SBP, SFAs that serve 60 percent or more free or reduced-price lunches vs. SFAs that serve 59 percent or fewer free or reduced-price lunches, and large vs. small and medium SFAs. Exhibits summarizing longitudinal data also report the results of t-tests between years, i.e., between values for Year One and Year Three. Because of the large number of t-tests calculated for this report, discussions are limited to variables that exhibit a difference between subgroups of SFAs or between years that is statistically significant at the .01 rather than at the more liberal .05 level. This approach compensates for the possibility of finding large numbers of comparisons significant by chance alone.

The reader will notice that some differences (either between subgroups of SFAs in the same year or year-to-year differences for the same subgroup of SFAs) appear to be "large" but are not statistically significant. This can occur because (1) there is a large amount of variation in the measure, (2) there is a relatively small sample size (e.g., this happens for private SFAs), and (3) as described above, the study is using a relatively conservative significance level.

In addition, the weighted sample sizes included in any given exhibit may vary for two reasons:

- Sample sizes for cross-sectional and longitudinal data sets are different, as described earlier in this section, so the total number of cases available for inclusion in a given analysis will vary depending on the source of the data.

- The data required to compute SFA poverty level (annual free and reduced meal counts) were missing for some cases included in the cross-sectional data set. Thus, in exhibits presenting cross-sectional data, sample sizes for SFA poverty level subgroups vary from other subgroups.

SECTION II
STUDENT PARTICIPATION IN THE NSLP AND SBP

This section presents estimates of participation in the NSLP and SBP for three school years: SY 1987-88, SY 1988-89, and SY 1989-90. Participation is examined at two levels: (1) total annual participation (number of meals served annually), and (2) student participation rates (i.e., the proportion of potential participants, overall and for each meal reimbursement category, that actually consume a school meal on an average school day). The section concludes with an assessment of the accuracy of meal counts as reported by SFAs.

BACKGROUND

FNS has an ongoing interest in measuring and understanding participation in the school-based Child Nutrition Programs because Federal subsidies are tied to the number of meals actually served. While FNS collects data on the number of meals served as part of the normal reporting requirements imposed on SFAs, the data available to FNS are aggregated at the State level. Alternatively, the CNOPS survey offers disaggregated data to allow FNS to examine meal counts for subgroups of SFAs. Of additional interest is this study's ability to help FNS understand the factors that affect average student participation at the SFA level, and how school meal service activity responds to changes in Federal subsidies and meal prices. This information is of critical importance to the Agency's budgetary and regulatory responsibilities.

FNS has devoted substantial resources to collecting data on student participation in the Child Nutrition Programs as part of two National Evaluations of School Nutrition Programs.1/ In addition, sophisticated prediction models have been developed that allow FNS to estimate the effect of changes in Federal subsidies and meal prices on student participation. The primary difficulty with these models, however, has been their dependence on individual student data. Because FNS does not regularly collect such information, the Agency cannot readily update or refine these models over time without continually mounting very expensive data collection efforts. The

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1/Wellisch, J.B., S.D. Hanes, L.A. Jordan, K.M. Maurer, and J.A. Vermeersch, The National Evaluation of School Nutrition Programs: Final Report. Santa Monica, CA: Systems Development Corporation, 1983 (referred to as NESNP-I).

Characteristics of the National School Lunch and School Breakfast Program Participants. USDA, Food and Nutrition Service, 1988 (referred to as NESNP-II).

data from the present study can help FNS develop a participation model based on information that can be obtained on a regular basis from SFAs.1/ Collecting institutional-level data is far less expensive and, if properly combined with the student-level models, can be used to produce accurate predictions of responses to changes in the nature of the programs.

KEY RESEARCH ISSUES

To meet these data needs, this study provided for the collection of annual data on the number of NSLP and SBP meals served by eligibility category, and the number of students potentially able to participate in the NSLP and SBP. These data were used to address the following research questions:

- What is the level of participation in the NSLP and SBP?
- Does the pattern of participation (e.g., the percentage distribution of free, reduced, and paid meals served) and the rate of student participation vary by type of SFA?
- How do student participation rates vary for elementary and secondary schools?
- How accurate are the meal counts reported by SFAs?

Data on total annual participation and student participation rates for SY 1987-88 and SY 1988-89 were presented in the Year One and Year Two reports from this study. The current report includes data from all three years of the study, and assesses the extent to which participation has changed over time. Results related to the total number of NSLP and SBP meals served (total annual participation) are presented first, followed by data on the average daily rate of student participation.

DATA AND VARIABLES

Data used to calculate total NSLP and SBP participation as well as student participation rates were collected in each of the three SFA Manager Surveys.

1/Existing FNS management information systems collect data only at the State level.

Data included annual meal counts of breakfasts and lunches served in SY 1987-88 (Year One Survey), SY 1988-89 (Year Two Survey), and SY 1989-90 (Year Three Survey) by meal reimbursement category. The majority of SFA managers, and State Agencies where necessary, were able to provide this information. In a few instances, reported meal counts were for one month (typically October), rather than complete annual counts. These monthly counts were adjusted to reflect estimated annual totals by multiplying by a factor of 9. Responses from individual SFAs were then weighted and aggregated to produce national estimates of the number of meals served in the NSLP and SBP, the percentage of meals served in several different subgroups of SFAs, and the percentage distribution of free, reduced-price and paid meals.

Where possible, the weighted survey data were compared to results from prior research studies and FNS administrative data. Because the survey weights were ratio-adjusted to known population totals, based on FNS' administrative data, the resulting estimates for total NSLP and SBP meals compare closely to estimates derived from this source. (See Appendix C for details on the weighting methodology used in this study.)

Additional data collected in both surveys for the purposes of calculating student participation rates included total enrollment, the number of students approved for free and reduced-price meals, average daily attendance rates, and annual number of operating days. The reference year for these data, with the exception of annual number of operating days, was the year the surveys took place. For the most part, these data were readily available from SFA records.

To estimate the accuracy of reported meal claims we calculated the same ratio used by FNS in their Federal Review process. The "attendance-adjusted claiming ratio for free meals" reflects the proportion of the total possible number of eligible free NSLP meals that were claimed by an SFA for reimbursement. A claiming ratio of 1.0 indicates that the school claimed a free meal for every eligible child on every day of operation. A value exceeding 1.0 indicates that the number of free meals claimed exceeds the maximum number of possible meals. The claiming ratio for each SFA was calculated as follows:

$$\text{claiming ratio} = a/(b*c*d)$$

where

- a = number of free meals claimed for the year by the SFA,
- b = number of children approved for free meals in the SFA,
- c = number of operating days for the year, and
- d = attendance rate for the SFA.

TOTAL ANNUAL PARTICIPATION

Estimated NSLP Participation

Data from the SFA Manager Surveys indicate that about 4.0 billion lunches were served to school children in SY 1987-88, SY 1988-89 and SY 1989-90 (Exhibit II.1). In each of these years, almost all lunches (98 percent) were served in public schools. In each year, most school lunches were served in SFAs that also offered the SBP (about 60-70 percent), in large SFAs (about 62 percent), and in SFAs that serve 59 percent or fewer free or reduced-price lunches (67 percent).

These data are consistent with the continued expansion of the SBP into new SFAs and schools.1/ As a result of this program growth into new SFAs and schools, the percentage of lunches served by SFAs that offer both the NSLP and SBP has increased significantly from 59 percent in SY 1987-88 to 70 percent in SY 1989-90. It should be clear that this increase in the number of lunches served in SFAs offering the SBP is due to an increase in the number of SFAs and schools offering the SBP. Changes in student-level participation rates are addressed later in this chapter.

Exhibits II.2, II.3, and II.4 show the proportion of school lunches served nationally to children who receive free meals, children who receive reduced-price meals, and children who pay full price for their meals, respectively. In each year, about 40 percent of all lunches were served free of charge to children from low-income families, about 7 percent were served at a reduced price, and about 53 percent were served to children who paid full price for their lunch. Thus, the distribution of total lunches across the three income-eligibility categories has not changed over the past three years.

In SY 1987-88, the distribution of NSLP meals by eligibility category varied by type of SFA: public SFAs, SFAs that participate in both the NSLP and SBP, large SFAs, and SFAs that serve 60 percent or more free or reduced-price lunches are more likely to serve free meals. Conversely, private SFAs, SFAs that do not participate in the SBP, small and medium-sized SFAs and SFAs that serve 59 percent or fewer free or reduced-price lunches serve a higher proportion of paid meals--over 60 percent of the lunches served in these SFAs were paid meals.2/

1/Annual Historical Review of FNS Programs: Fiscal Year 1989, USDA, Food and Nutrition Service, 1990. In SY 1984-85, the SBP was available to 33 percent of all U.S. school children; in SY 1985-86, 35 percent; in 1986-87, 36 percent; in 1987-88, 38 percent; and in 1988-89, 41 percent.

2/T-tests among subgroups were conducted only for the first year of this study (SY 1987-88). Because most changes across years were small, it is likely that between-group differences which were significant in SY 1987-88 are also significant in other years of the study.

Exhibit II.1

Annual NSLP Participation by Type of SFA:
Total Lunches
(SY 1987-88, SY 1988-89, and SY 1989-90)

	SY 1987-88 (n=4,002.1 million) Percent[1]	SY 1988-89 (n=3,970.2 million) Percent[1]	SY 1989-90 (n=4,007.4 million) Percent[1]	(SY 1989-90)-(SY1987-88) Difference
TOTAL SAMPLE	100.0%	100.0%	100.0%	n.a.
Type of SFA				
Public	97.9	97.9	97.9	0.0
Private	2.1	2.1	2.1	0.0
Participation in SBP				
NSLP and SBP	59.2	67.4	70.0	10.8*
NSLP only	40.8	32.6	30.0	-10.8*
SFA Size				
Small (1-999)	7.8	6.7	6.7	-1.1
Medium (1,000-4,999)	30.8	29.6	28.4	-2.4
Large (5,000+)	61.4	63.7	64.9	3.5
Poverty Level of SFA				
60% or more F&R	33.1	33.3	32.8	-0.3
0-59% F&R	66.9	66.7	67.2	0.3

[1]Represents the percentage of total lunches.

*Year-to-year difference is statistically significant at the .01 level.

Note: Differences between subgroups of SFAs (e.g., public vs. private) were not tested for statistical significance since the number of meals served in a given type of SFA largely reflects the distribution of SFAs in the population.

Data Source: Year One, Year Two, and Year Three SFA Manager Surveys.

Exhibit II.2

Annual NSLP Participation by Type of SFA:
Free Lunches
(SY 1987-88, SY 1988-89, and SY 1989-90)

	SY 1987-88 Percent[1]	SY 1988-89 Percent[1]	SY 1989-90 Percent[1]	(SY 1989-90)-(SY1987-88) Difference
TOTAL SAMPLE	39.7%	39.9%	39.8%	0.1%
Type of SFA				
Public	40.1*	40.1	40.1	0.0
Private	22.7	29.0	24.6	1.9
Participation in SBP				
NSLP and SBP	51.9*	48.2	47.8	-4.1
NSLP only	22.1	22.6	21.0	-1.1
SFA Size				
Small (1-999)	26.6*	30.3	30.8	4.2
Medium (1,000-4,999)	29.2*	29.9	28.1	-1.1
Large (5,000+)‡	46.7	45.5	45.8	-0.9
Poverty Level of SFA				
60% or more F&R	69.1*	68.7	69.2	0.1
0-59% F&R	25.2	25.5	25.4	0.2

[1]Represents the percentage of total lunches served free in a given subgroup. Sums to 100 percent across free (Exhibit II.2), reduced-price (Exhibit II.3) and paid lunches (Exhibit II.4).

*Between-group or year-to-year difference is statistically significant at the .01 level. Between-group comparisons were done for Year One but not for Year Two or Year Three.

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

Data Source: Year One, Year Two, and Year Three SFA Manager Surveys.

Exhibit II.3

Annual NSLP Participation by Type of SFA:
Reduced-Price Lunches
(SY 1987-88, SY 1988-89, and SY 1989-90)

	SY 1987-88 Percent[1]	SY 1988-89 Percent[1]	SY 1989-90 Percent[1]	(SY 1989-90)-(SY1987-88) Difference
TOTAL SAMPLE	6.6%	6.7%	6.7%	0.1%
Type of SFA				
Public	6.5	6.7	6.6	0.1
Private	9.1	8.5	8.9	-0.2
Participation in SBP				
NSLP and SBP	7.1	7.2	7.0	-0.1
NSLP only	5.7	5.8	5.8	0.1
SFA Size				
Small (1-999)	6.6	6.1	7.0	0.4
Medium (1,000-4,999)	6.2	6.6	6.3	0.1
Large (5,000+)‡	6.7	6.9	6.8	0.1
Poverty Level of SFA				
60% or more F&R	7.8	8.0	7.5	-0.3
0-59% F&R	5.9	6.1	6.7	0.8

[1]Represents the percentage of total lunches served at reduced-price in a given subgroup. Sums to 100 percent across free (Exhibit II.2), reduced-price (Exhibit II.3), and paid lunches (Exhibit II.4).

None of the between-group or year-to-year differences is statistically significant. Between-group comparisons were done for Year One but not for Year Two or Year Three.

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

Data Source: Year One, Year Two, and Year Three SFA Manager Surveys.

Exhibit II.4

Annual NSLP Participation by Type of SFA:
Paid Lunches
(SY 1987-88, SY 1988-89, and SY 1989-90)

	SY 1987-88 Percent[1]	SY 1988-89 Percent[1]	SY 1989-90 Percent[1]	(SY 1989-90)-(SY1987-88) Difference
TOTAL SAMPLE	53.7%	53.4%	53.6%	-0.1%
Type of SFA				
Public	53.4*	53.2	53.3	-0.1
Private	68.2	62.5	66.5	-1.7
Participation in SBP				
NSLP and SBP	41.0*	44.6	45.1	4.1
NSLP only	72.2	71.7	73.2	1.0
SFA Size				
Small (1-999)	66.9*	63.6	62.3	-4.6
Medium (1,000-4,999)	64.6*	63.5	65.6	1.0
Large (5,000+)‡	46.6	47.6	47.4	0.8
Poverty Level of SFA				
60% or more F&R	23.0*	23.3	23.3	0.3
0-59% F&R	68.9	68.5	68.3	-0.6

[1]Represents the percentage of total lunches served paid in a given subgroup. Sums to 100 percent across free (Exhibit II.2), reduced-price (Exhibit II.3) and paid (Exhibit II.4) lunches.

*Between-group or year-to-year difference is statistically significant at the .01 level. Between-group comparisons were done for Year One but not for Year Two or Year Three.

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

Data Source: Year One, Year Two, and Year Three SFA Manager Surveys.

A number of the changes from SY 1987-88 to SY 1989-90 appear large (e.g., a decrease of 4 percent in the proportion of meals served free in NSLP/SBP schools); however, none of these observed differences are statistically significant.1/

Estimated SBP Participation

Data from the SFA Manager Surveys show large increases in SBP participation over the last three years. About 604 million school breakfasts were served to school children in SY 1987-88, about 623 million breakfasts were served in SY 1988-89, and 705 million were served in SY 1989-90 (Exhibit II.5).

The percentage of breakfasts served in public vs. private SFAs and in SFAs of varying sizes was quite consistent across the three years. In each year, over 98 percent of all breakfasts were served in public SFAs, and about 75 percent were served in large SFAs. The percentage of meals served in high versus low-poverty SFAs appears to vary over time, but none of the year-to-year differences were statistically significant.

Exhibits II.6, II.7, and II.8 show the number of school breakfasts served in SY 1987-88, SY 1988-89 and SY 1989-90 to children who qualify for free meals, children who qualify for reduced-price meals, and children who pay full price for their meals respectively. Overall, more than 80 percent of all breakfasts were served free or at a reduced price in each of the three years. The same conclusion holds for each subgroup of SFAs examined in this study (public, private, large, medium, small, 60 percent or more free or reduced-price lunches, and 59 percent or fewer free or reduced-price lunches).

The only between-group difference that is statistically significant is that in SY 1987-88, medium-size SFAs served significantly more paid breakfasts and significantly fewer free breakfasts than large SFAs.2/ Although some of the year-to-year differences for particular subgroups of SFAs appear to be large, e.g. a 6.4 percentage point increase for free breakfasts in private SFAs, or a 6.7 percentage point decrease for free breakfasts in SFAs that serve 59 percent or fewer free or reduced-price lunches, none of these differences are statistically significant.

1/The combination of relatively large standard errors and the use of a stringent statistical test (i.e., $p < 0.01$) yields this result.

2/Examining between-group differences for SY 1989-90 reveals that medium-sized SFAs continue to serve significantly fewer free breakfasts than large SFAs, but that there is no longer a statistically significant difference between medium-sized and large SFAs in terms of the percentage of paid breakfasts.

Exhibit II.5

Annual SBP Participation by Type of SFA:
Total Breakfasts
(SY 1987-88, SY 1988-89, and SY 1989-90)

	SY 1987-88 (n=603.8 million) Percent[1]	SY 1988-89 (n=623.3 million) Percent[1]	SY 1989-90 (n=705.2 million) Percent[1]	(SY 1989-90)-(SY1987-88) Difference
TOTAL SAMPLE	100.0%	100.0%	100.0%	n.a
Type of SFA				
Public	99.1	98.3	99.1	0.0
Private	0.9	1.7	0.9	0.0
SFA Size				
Small (1-999)	5.8	4.0	5.4	-0.4
Medium (1,000-4,999)	18.3	19.3	16.9	-1.4
Large (5,000+)‡	75.9	76.7	77.7	1.8
Poverty Level of SFA				
60% or more F&R	54.4	49.1	59.3	4.9
0-59% F&R	45.6	50.9	40.7	-4.9

[1]Represents the percentage of total breakfasts.

Notes: Differences between subgroups of SFAs (e.g., public vs. private) were not tested for statistical significance since the number of meals served in a given type of SFA largely reflects the distribution of SFAs in the population.

None of the year-to-year differences is statistically significant.

Data Source: Year One, Year Two, and Year Three SFA Manager Surveys.

Exhibit II.6

Annual SBP Participation by Type of SFA:
Free Breakfasts
(SY 1987-88, SY 1988-89, and SY 1989-90)

	SY 1987-88 Percent[1]	SY 1988-89 Percent[1]	SY 1989-90 Percent[1]	(SY 1989-90)-(SY1987-88) Difference
TOTAL SAMPLE	83.3%	78.9%	80.6%	-2.7%
Type of SFA				
Public	83.4	79.0	80.6	-2.8
Private	71.4	73.1	77.8	6.4
SFA Size				
Small (1-999)	75.5	76.3	77.5	2.0
Medium (1,000-4,999)	73.6*	73.3	74.1	0.5
Large (5,000+)‡	86.3	80.4	82.2	-4.1
Poverty Level of SFA				
60% or more F&R	88.3	86.6	87.3	-1.0
0-59% F&R	77.4	71.4	70.7	-6.7

[1]Represents the percentage of total breakfasts served free in a given subgroup. Sums to 100 percent across free, reduced-price (Exhibit II.7) and paid breakfasts (Exhibit II.8).

*Between-group or year-to-year difference is statistically significant at the .01 level. Between-group comparisons were done for Year One but not for Year Two or Year Three.

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

Data Source: Year One, Year Two, and Year Three SFA Manager Surveys.

Exhibit II.7

Annual SBP Participation by Type of SFA:
Reduced-Price Breakfasts
(SY 1987-88, SY 1988-89, and SY 1989-90)

	SY 1987-88 Percent[1]	SY 1988-89 Percent[1]	SY 1989-90 Percent[1]	(SY 1989-90)-(SY1987-88) Difference
TOTAL SAMPLE	5.2%	5.8%	5.6%	0.4%
Type of SFA				
Public	5.1	5.7	5.4	0.3
Private	8.9	9.3	8.8	-0.1
SFA Size				
Small (1-999)	7.1	6.4	6.5	-0.6
Medium (1,000-4,999)	6.4	7.3	7.2	0.8
Large (5,000+)‡	4.7	5.4	5.1	0.4
Poverty Level of SFA				
60% or more F&R	4.7	5.2	4.9	0.2
0-59% F&R	5.6	6.3	6.5	0.9

[1]Represents the percentage of total breakfasts served at a reduced-price in a given subgroup. Sums to 100 percent across free (Exhibit II.6), reduced-price, and paid breakfasts (Exhibit II.8).

Note: None of the between-group or year-to-year differences is statistically significant. Between-group comparisons were done for Year One but not for Year Two or Year Three.

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

Data Source: Year One, Year Two, and Year Three SFA Manager Surveys.

Exhibit II.8

Annual SBP Participation by Type of SFA:
Paid Breakfasts
(SY 1987-88, SY 1988-89, and SY 1989-90)

	SY 1987-88 Percent[1]	SY 1988-89 Percent[1]	SY 1989-90 Percent[1]	(SY 1989-90)-(SY1987-88) Difference
TOTAL SAMPLE	11.5%	15.4%	13.9%	2.4%
Type of SFA				
Public	11.5	15.3	13.9	2.4
Private	19.6	17.6	13.4	-6.2
SFA Size				
Small (1-999)	17.4	17.3	16.0	-1.4
Medium (1,000-4,999)	20.0*	19.5	18.7	-1.3
Large (5,000+)‡	9.0	14.2	12.7	3.7
Poverty Level of SFA				
60% or more F&R	6.9	8.2	7.7	0.8
0-59% F&R	17.0	22.2	22.8	5.8

[1]Represents the percentage of total breakfasts served paid in a given subgroup. Sums to 100 percent across free (Exhibit II.6), reduced-price (Exhibit II.7) and paid breakfasts.

*Between-group or year-to-year difference is statistically significant at the .01 level. Between-group comparisons were done for Year One but not for Year Two or Year Three.

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

Data Source: Year One, Year Two, and Year Three SFA Manager Surveys.

Comparison with FNS Administrative Data

Exhibit II.9 summarizes annual NSLP participation for SY 1987-88, SY 1988-89, and SY 1989-90 as estimated in this study (see the columns titled CNOPS Data) and as reported in FNS program data. Exhibit II.10 provides a similar comparison for SBP participation. Because of the way in which the survey weights were constructed, the estimates of the total number of meals served in each year agree quite well, not differing by more than a percentage point or two for any income-eligibility category.

STUDENT PARTICIPATION RATES

This section begins with a discussion of overall student participation rates. The overall participation rate computed for the full sample is then compared to estimates derived from FNS administrative data for the same time period. Next, participation rates for elementary and middle/secondary schools are discussed, and finally, separate participation rates for free, reduced-price and paid meals are presented. The participation rate for students approved for free meals is defined as the number of meals served during the year to all students approved for free meals divided by the number of meals that would have been provided if all students approved for free meals had received a meal each day. The participation rate for students approved for reduced-price meals is similarly defined as the number of meals served during the year to all students approved for reduced-price meals divided by the number of meals that would have been provided if all students approved for reduced-price meals had received a meal each day. Finally, the participation rate for students who pay full price is defined as the number of meals served during the year to students not approved for either free or reduced-price meals divided by the number of meals that would have been provided if all students who pay full price had received a reimbursable meal each day.1/

NSLP Student Participation **Rates**

Overall Student Participation Rates. Exhibit II.11 summarizes NSLP participation rates for children in the free, reduced-price, and paid income-eligibility categories. Exhibit II.12 presents details on estimated student participation rates for the NSLP, summing across free, reduced-price, and paid meals. The national estimate for overall NSLP student participation ranges from 58 to 60 percent across SY 1987-88, SY 1988-89, and SY 1989-90. That is, on an average day, about 58-60 percent of students who have the NSLP available to them actually participate in the program.

1/The denominator for each participation rate reflects the number of children that had access to the NSLP rather than total enrollment. For example, children in half-day kindergarten do not have access to the NSLP and hence were excluded from the denominator.

Exhibit II.9

Annual NSLP Participation:
Comparison of CNOPS and FNS Administrative Data:
(SY 1987-88, SY 1988-89, and SY 1989-90)

	SY 1987-88		SY 1988-89		SY 1989-90	
	CNOPS Data (n=4,002.1 million) Percent[1]	FNS Data[2,3] (n=4,000.4 million) Percent[1]	CNOPS Data (n=3,970.2 million) Percent[1]	FNS Data[2,3] (n=3,971.9 million) Percent[1]	CNOPS Data (n=4,007.4 million) Percent[1]	FNS Data[2,3] (n=4,007.5 million) Percent[1]
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Free	39.7	40.5	39.9	40.2	39.8	41.4
Reduced-Price	6.6	6.5	6.7	6.6	6.7	6.8
Paid	53.7	53.0	53.4	53.2	53.6	51.8

[1]Represents the percentage of total lunches.

[2]Data Source: FNS/PID/Monthly Program Report Summaries. National School Lunch Program, FY 1988, FY 1989 and FY 1990. USDA, Food and Nutrition Service, 1989, 1990, and 1991.

[3]CNOPS data are based on School Year (September-June) totals; FNS data are based on Fiscal Year (July-June) totals.

Exhibit II.10

Annual SBP Participation: Comparison of CNOPS and FNS Administrative Data: (SY 1987-88, SY 1988-89, and SY 1989-90)

	SY 1987-88		SY 1988-89		SY 1989-90	
	CNOPS Data (n=603.8 million) Percent[1]	FNS Data[2,3] (n=604.9 million) Percent[1]	CNOPS Data (n=623.3 million) Percent[1]	FNS Data[2,3] (n=623.3 million) Percent[1]	CNOPS Data (n=705.2 million) Percent[1]	FNS Data[2,3] (n=705.8 million) Percent[1]
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Free	83.3	81.7	78.9	80.9	80.6	81.4
Reduced-Price	5.2	5.0	5.8	5.3	5.6	5.3
Paid	11.5	13.3	15.4	13.8	13.9	13.3

[1]Represents the percentage of total breakfasts.

[2]Data Source: FNS/PID/Monthly Program Report Summaries. National School Lunch Program, FY 1988, FY 1989 and FY 1990. USDA, Food and Nutrition Service, 1989, 1990 and 1991.

[3]CNOPS data are based on School Year (September-June) totals; FNS data are based on Fiscal Year (July-June) totals.

Exhibit II.11

NSLP Participation Rates by Meal Reimbursement Category
(SY 1987-88, SY 1988-89, and SY 1989-90)

	SY 1987-88 Mean	SY 1988-89 Mean	SY 1989-90 Mean	(SY1989-90)-(SY1987-88) Difference
TOTAL	59.1%	60.2%	58.4%	-0.7%
Free	89.7	88.0	85.3	-4.4
Reduced-Price	73.0	71.3	68.9	-4.1
Paid	45.6	48.0	46.2	0.6

Data Source: Year One, Year Two and Year Three SFA Manager Surveys.

Exhibit II.12

NSLP Student Participation Rates by Type of SFA:
Total Lunches
(SY 1987-88, SY 1988-89, and SY 1989-90)

	SY 1987-88 Mean	Total Number of Potential Participants[1] (Weighted)	SY 1988-89 Mean	Total Number of Potential Participants[1] (Weighted)	SY 1989-90 Mean	Total Number of Potential Participants[1] (Weighted)	(SY1989-90)-(SY1987-88) Difference
TOTAL SAMPLE	59.1%	41.1	60.2%	39.9	58.4%	41.5	-0.7%
Type of SFA							
Public	59.1	40.2	60.3	39.0	58.4	40.6	-0.7
Private	57.9	0.8	56.1	0.9	60.7	0.8	2.8
Participation in SBP							
NSLP and SBP	63.1*	22.7	62.6	25.8	60.4	27.9	-2.7
NSLP only	54.1	18.4	55.9	14.1	54.2	13.6	0.1
SFA Size							
Small (1-999)	68.8*	2.8	68.8	2.4	64.5	2.5	-4.3
Medium (1,000-4,999)	60.4	12.4	60.8	11.7	60.5	11.5	0.1
Large (5,000+)‡	57.5	25.9	59.2	25.8	57.0	27.5	-0.5
Poverty Level of SFA							
60% or more F&R	66.5*	12.1	63.3	12.7	62.3	12.6	-4.2
0-59% F&R	56.0	29.0	58.8	27.1	56.7	28.9	0.7

[1]Millions of students that have NSLP available to them.

*Between-group or year-to-year difference is statistically significant at the .01 level. Between-group comparisons were done for Year One but not for Year Two or Year Three.

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

Data Source: Year One, Year Two, and Year Three SFA Manager Surveys.

In examining overall participation rates across types of SFAs, significantly higher rates of student participation are found in SFAs offering the SBP, small SFAs, and SFAs that serve 60 percent or more free or reduced-price lunches. None of the year-to-year differences in overall student participation rates are statistically significant even though overall participation rates appears to have decreased by about four percentage points for small SFAs and for SFAs that serve 60 percent or more free or reduced-price lunches.

Comparison with FNS Administrative Data. The estimated overall participation rates based on data from this study (59 percent in SY 1987-88, 60 percent in SY 1988-89, and 58 percent in SY 1989-90) agree quite well with the estimates of 59, 58 and 55 percent reported by FNS.1/

Variation by Grade Level. Past research has demonstrated that participation rates differ for students of different ages, with younger children participating more frequently than older children. Data from the present study support that finding, indicating that participation rates are significantly higher in elementary schools than in middle/secondary schools (Exhibit II.13). On an average school day in SY 1987-88, 72 percent of elementary school students selected an NSLP meal compared to 49 percent of secondary school students. Both percentages were reduced in SY 1989-90, to 66 percent and 44 percent respectively. However, the changes are not statistically significant.2/

Free Lunch Student Participation Rates. The estimated NSLP participation rate for children approved for free lunches is 90 percent in SY 1987-88, 88 percent in SY 1988-89, and 85 percent for SY 1989-90 (Exhibit II.14). A high level of participation (over 80 percent) is observed for free lunches in each year for each of the subgroups of SFAs assessed in this study. None of the between-group differences, nor the apparent year-to-year reductions which are on the order of four to six percentage points for several subgroups of SFAs, were found to be statistically significant.

1/Annual Historical Review of FNS Programs: Fiscal Year 1989. USDA, Food and Nutrition Service, 1990. FNS' participation rates are calculated by determining the average number of meals served and dividing by program enrollment, using unrounded data.

2/The apparent discrepancy in participation rates between Exhibits II.12 and II.13 is due to the fact that the rates in Exhibit II.13 are based on data from the subset of SFAs that provided information separately for elementary and secondary schools. Only 61 percent of all SFAs were able to provide the elementary/secondary breakdown.

Exhibit II.13

NSLP Student Participation Rates in Elementary and Middle/Secondary Schools: Total Lunches (SY 1987-88, SY 1988-89, and SY 1989-90)

	SY 1987-88[1] Mean	SY 1988-89[1] Mean	SY 1989-90[1] Mean	(SY1989-90)-(SY1987-88) Difference
Elementary Schools	71.6%*	71.4%	66.1%	-5.5%
Middle/Secondary Schools	48.7	48.4	43.6	-5.1

[1]Numbers in this exhibit are based on the subset of SFAs that provided enrollment and meal count data separately for elementary and middle/secondary schools. This difference in samples accounts for the apparent (but not statistically significant) drops in participation for children in elementary schools (drop of 5.5%) and in middle/secondary schools (drop of 5.1%) in the present exhibit, while participation rates clearly did not change over time in Exhibit III.12, where data on elementary and middle/secondary schools were combined.

*Difference between elementary and middle/secondary schools is statistically significant at the .01 level.

Data Source: Year One, Year Two and Year Three SFA Manager Surveys.

Exhibit II.14

NSLP Student Participation Rates by Type of SFA:
Free Lunches
(SY 1987-88, SY 1988-89, and SY 1989-90)

	SY 1987-88 Mean	Total Number of Potential Participants[1] (Weighted)	SY 1988-89 Mean	Total Number of Potential Participants[1] (Weighted)	SY 1989-90 Mean	Total Number of Potential Participants[1] (Weighted)	(SY1989-90)-(SY1987-88) Difference
TOTAL SAMPLE	89.7%	10.6	88.0%	10.8	85.3%	11.1	-4.4%
Type of SFA							
Public	89.8	10.5	88.1	10.6	85.3	11.0	-4.5
Private	83.6	0.1	84.2	0.2	88.2	0.1	4.6
Participation in SBP							
NSLP and SBP	90.2	8.1	88.5	8.7	85.5	9.3	-4.7
NSLP only	88.3	2.5	85.7	2.0	84.3	1.8	-4.0
SFA Size							
Small (1-999)	89.5	0.6	89.3	0.5	82.7	0.6	-6.8
Medium (1,000-4,999)	89.7	2.4	86.3	2.4	87.7	2.2	-2.0
Large (5,000+)‡	89.8	7.6	88.4	7.8	84.9	8.3	-4.9
Poverty Level of SFA							
60% or more F&R	89.8	6.1	89.6	6.1	86.5	6.2	-3.3
0-59% F&R	89.7	4.5	86.0	4.7	83.9	4.9	-5.8

[1]Millions of students have NSLP available to them.

*Between-group or year-to-year difference is statistically significant at the .01 level. Between-group comparisons were done for Year One but not for Year Two or Year Three.

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

Data Source: Year One, Year Two, and Year Three SFA Manager Surveys.

Reduced-Price Student Participation Rates. NSLP participation among children approved for reduced-price lunches is consistently lower than participation rates for free lunches, but higher than participation rates for children who pay full price for their NSLP meals. The estimated NSLP participation rate for all students approved for reduced-price meals is 73 percent in SY 1987-88, 71 percent in SY 1988-89, and 69 percent in SY 1989-90 (Exhibit II.15). As with free meals, the apparent year-to-year reductions of about four percentage points for several subgroups of SFAs are not statistically significant.

Paid Meal Student Participation Rates. Participation among children who must pay full price for an NSLP meal is markedly lower than participation for children who are approved for free or reduced-price meals. An estimated 46 percent of children who pay full price purchased a reimbursable school lunch on an average school day in SY 1987-1988, an estimated 48.0 percent did so in SY 1988-89, and 46 percent paid full-price in SY 1989-90 (Exhibit II.16). Again, none of the year-to-year differences are statistically significant, even the apparent 14 percent point increase for private schools.

During SY 1987-88, paid NSLP participation rates did differ significantly among SFAs of varying sizes. Paying students in small and medium-sized SFAs participate more frequently than comparable students in large SFAs. This can be attributed to several factors, e.g., students in small- and medium-size SFAs have fewer options available to them at meal time; also many small SFAs have a strong history of supporting the NSLP. Paid NSLP participation was also significantly higher in SFAs that serve 59 percent or fewer free or reduced-price lunches than in SFAs that serve 60 percent or more free or reduced-price lunches.

SBP Participation Rates

Because of missing data, the overall student participation rate for the SBP could only be calculated for a subset of about three-quarters of the SFAs offering the program. Based on data for this reduced sample, it is estimated that 21 percent of students enrolled in schools offering the SBP participated on an average day in SY 1987-88, 21 percent participated in SY 1988-89, and 20 percent in SY 1989-90 (Exhibit II.17). These estimates are close to the estimates of about 21 percent derived from FNS' administrative data for SY 1987-88 and SY 1988-89, and about 19 percent for SY 1989-90.1/

Data on differences in SBP participation rates by meal reimbursement category are also presented in Exhibit II.17. These data must, however, be

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1/Annual Historical Review of FNS Programs: Fiscal Year 1989. USDA, Food and Nutrition Service, 1990.

Exhibit II.15

NSLP Student Participation Rates by Type of SFA:
Reduced-Price Lunches
(SY 1987-88, SY 1988-89, and SY 1989-90)

	SY 1987-88 Mean	Total Number of Potential Participants[1] (Weighted)	SY 1988-89 Mean	Total Number of Potential Participants[1] (Weighted)	SY 1989-90 Mean	Total Number of Potential Participants[1] (Weighted)	(SY1989-90)-(SY1987-88) Difference
TOTAL SAMPLE	73.0%	2.2	71.3%	2.3	68.9%	2.3	-4.1%
Type of SFA							
Public	72.8	2.1	71.3	2.2	68.7	2.3	-4.1
Private	80.0	0.1	71.6	0.1	78.7	0.1	-1.3
Participation in SBP							
NSLP and SBP	72.3	1.4	70.8	1.6	67.9	1.7	-4.4
NSLP only	74.4	0.8	72.5	0.6	72.0	0.6	-2.4
SFA Size							
Small (1-999)	79.5*	0.2	77.0	0.1	74.6	0.1	-4.9
Medium (1,000-4,999)	74.2	0.6	72.7	0.6	72.8	0.6	-1.4
Large (5,000+)‡	71.8	1.4	70.2	1.5	67.0	1.6	-4.8
Poverty Level of SFA							
60% or more F&R	69.2	0.9	68.3	0.9	64.4	0.9	-4.8
0-59% F&R	75.7	1.3	73.4	1.3	71.8	1.4	-3.9

[1]Millions of students that have NSLP available to them.

*Between-group or year-to-year difference is statistically significant at the .01 level. Between-group comparisons were done for Year One but not for Year Two or Year Three.

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

Data Source: Year One, Year Two, and Year Three SFA Manager Surveys.

Exhibit II.16

NSLP Student Participation Rates by Type of SFA:
Paid Lunches
(SY 1987-88, SY 1988-89, and SY 1989-90)

	SY 1987-88 Mean	Total Number of Potential Participants[1] (Weighted)	SY 1988-89 Mean	Total Number of Potential Participants[1] (Weighted)	SY 1989-90 Mean	Total Number of Potential Participants[1] (Weighted)	(SY1989-90)-(SY1987-88) Difference
TOTAL SAMPLE	45.6%	28.5	48.0%	26.6	46.2%	28.1	0.6%
Type of SFA							
Public	45.9	27.6	48.0	26.0	46.1	27.4	0.2
Private	38.6	0.9	48.1	0.6	52.6	0.7	14.0
Participation in SBP							
NSLP and SBP	43.7	13.4	46.7	15.3	44.9	16.8	1.2
NSLP only	47.4	15.2	49.8	11.3	48.2	11.2	0.8
SFA Size							
Small (1-999)	61.8*	2.1	60.8	1.7	57.0	1.8	-4.8
Medium (1,000-4,999)	51.5*	9.4	53.1	8.5	52.5	8.7	1.0
Large (5,000+)‡	40.5	17.1	44.1	16.4	42.1	17.5	1.6
Poverty Level of SFA							
60% or more F&R	35.9*	5.1	34.0	5.5	33.1	5.5	-2.8
0-59% F&R	47.8	23.4	51.7	21.1	49.5	22.5	1.7

[1]Millions of students that have NSLP available to them.

*Between-group or year-to-year difference is statistically significant at the .01 level. Between-group comparisons were done for Year One but not for Year Two or Year Three.

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

Data Source: Year One, Year Two, and Year Three SFA Manager Surveys.

Exhibit II.17

SBP Participation Rates by Meal Reimbursement Category (SY 1987-88, SY 1988-89, and SY 1989-90)

	SY 1987-88[1] Mean	SY 1988-89[1] Mean	SY 1989-90[1] Mean	(SY1989-90)-(SY1987-88) Difference
TOTAL	20.8%	20.6%	20.1%	-0.7%
Free	43.2	41.9	39.9	-3.3
Reduced-Price	14.9	15.3	14.1	-0.8
Paid	4.3	5.0	4.7	0.4

[1]In each year, the total participation rate was calculated for a subset (approximately 75 percent) of the SFAs offering the program. Free, reduced-price and paid participation rates were calculated for a subset comprised of about one-third of all SFAs offering the program.

Data Source: Year One, Year Two and Year Three SFA Manager Surveys.

viewed as very tentative because only about one-third of SFAs offering the SBP provided information on the breakdown of breakfast meals by eligibility category.1/ The data are quite consistent across years, indicating that SBP participation rates are highest for free meals in each year (43.2, 41.9, and 39.5 percent, respectively), and lowest for paid meals (4.3, 5.0 and 4.7 percent, respectively). The year-to-year differences are not statistically significant.

ACCURACY OF REPORTED MEAL COUNTS

Previous research on the accuracy of meal counts was reported both by FNS2/ and by the first year report of this study.3/ Those research efforts were designed to assess the accuracy of meal counts at the school level, since schools are the units that provide meal counts to SFAs, which provide aggregated counts to State offices. FNS found that schools have an average claiming ratio of 80 percent, i.e., they claim 80 free meals for every 100 approved applications on file (not taking attendance into account). Using the same methods (i.e., ignoring attendance), the first CNOPS report verified FNS' findings by reporting that schools have an average claiming ratio of 81 percent, i.e., they claim 81 meals for every 100 approved applications. The CNOPS study went further by finding that, when adjusting for attendance, schools have an average claiming ratio of 88 percent.

Data available for the present report are based on SFA aggregates, not on school-level reports. Hence, the findings are not likely to be exactly the same as the school-based findings. On the other hand, the current data set is useful in that it enables us to look at patterns of change in claiming ratios over time.

Exhibit II.18 presents distributions of attendance-adjusted claiming ratios for three years (SY 1988-89, SY 1989-90, and SY 1990-91), for several groups

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1/SFAs do retain data on the number of breakfasts served by income eligibility category. What was much more difficult for them to provide was the number of children approved for free or reduced-price meals in those schools participating in the SBP. Counts of numbers of children approved for meal benefits are generally available at the SFA level, but obtaining counts for individual schools is much more difficult.

2/Federal Review Final Report. U.S. Department of Agriculture, Food and Nutrition Service, Office of Analysis and Evaluation, February 1990.

3/St.Pierre, R. G. et al, Child Nutrition Program Operations Study: First Year Report. Cambridge, MA: Abt Associates Inc., August, 1991.

Exhibit II.18

Claiming Ratios for Free NSLP Meals
Claimed at SFA Level
(SY 1988-89, SY 1989-90, SY 1990-91)

	SY 1988-89			SY 1989-90			SY 1990-91		
	Claiming Ratio			Claiming Ratio			Claiming Ratio		
	0-79%	80-99%	100%+	0-79%	80-99%	100%+	0-79%	80-99%	100%+
TOTAL SAMPLE	20%	67%	13%	25%	57%	18%	27%	53%	20%
Type of SFA									
Public	19	70	11	23	62	15	30	52	18
Private	23	54	22	33	37	30	17	55	29
Participation in SBP									
NSLP and SBP	17	71	12	17	71	12	20	58	22
NSLP only	21	65	14	29	50	21	31	49	20
SFA Size									
Small (1-999)	19	65	16	24	47	29	28	43	29
Medium (1,000-4,999)	21	69	10	28	64	8	25	64	11
Large (5,000+)	22	66	12	22	69	9	29	57	13
SFA Poverty Level									
60% or more F&R	7	78	15	13	64	23	24	43	33
0-59% F&R	23	64	13	28	55	17	28	55	18
Total SFAs (weighted)	14,345			12,834			14,037		

Data Source: Year One, Year Two, and Year Three SFA Manager Surveys.

of SFAs. It shows that 13 percent of all SFAs have claiming ratios of 100 percent or more in SY 1988-89, indicating that, on average, these SFAs claimed more meals than they had applications on file. This percentage increased over time to 18 percent in SY 1989-90 and again to 20 percent in SY 1990-91. Looking only at the most recent year, it can be seen that 29 percent of private SFAs have claiming ratios over 100 percent compared to 18 percent of public SFAs; 29 percent of small SFAs have claiming ratios over 100 percent compared to 11 percent for medium-sized SFAs and 13 percent for large SFAs; and 33 percent of SFAs that serve 60 percent of their meals at free or reduced-price have claiming ratios over 100 percent compared to 18 percent of SFAs that serve 59 percent or less of their meals at free to reduced-price. Thus, the "overclaimers" are most likely to be private SFAs, small SFAs, and SFAs that serve large percentages of poor children.

The average claiming ratio was 89 percent in each of the three years under study. This is quite comparable to participation rates for children who receive free meals (see Exhibit II.14).

Two observations are helpful in understanding the above findings. First, the number of "overclaimed" meals is small relative to the total number of free meals served nationally. About 1.6 billion free meals were served nationally during each year of this study, and about 1.6 percent of these meals were possible overclaims.

Second, claiming ratios were calculated using the number of applications approved in October of each year and thus do not capture changes in the number of approved applicants during the school year. It should be noted that the number of approved applications for free meals increased during the period of this study, from 10.6 million in SY 1988-89, to 10.8 million in SY 1989-90, and again to 11.1 million in SY 1990-91. To the extent that additional children become eligible for free meals over the course of the school year, this analysis would overstate the ratio of claimed meals to eligible children.

SECTION III
MEAL PRICES

This section addresses issues related to meal prices in SFAs participating in the NSLP and SBP.

BACKGROUND

Previous research has shown that the price charged for an NSLP meal is a primary determinant of student participation decisions, i.e., higher prices lead to lower participation.1/ It is also known that payments collected from students represent a major source of revenue for school food service programs.

KEY RESEARCH ISSUES

To provide FNS with information on the prices charged for full-price, reduced-price, and adult lunches and breakfasts, this study addressed the following questions:

- What is the average price charged for full-price and reduced-price lunches in SY 1990-91?
- What is the average price charged for full-price and reduced-price breakfasts in SY 1990-91?
- How have prices changed from SY 1987-88 to SY 1990-91?

DATA AND VARIABLES

Information on meal prices for SY 1988-89 was requested in the Year One SFA Manager Mail Survey (retrospective data was requested for SY 1987-88). Respondents were asked to indicate the prices charged for paid and reduced-price student meals (lunches and breakfasts) as well as adult meals in elementary and middle/secondary schools at the start of SY 1988-89. Respondents were also asked to report any mid-year price changes that occurred. Similar questions on meal prices for SY 1989-90 and SY 1990-91 were included in

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1/Wellisch, J.B., Hanes, S.D., Jordan, L.A., Maurer,K.M., Vermeersch, J.: The National Evaluation of School Nutrition Programs: Final Report. Santa Monica, CA: Systems Development Corporation, 1983.

the Year Two and Year Three SFA Manager Surveys respectively, except that data on the prices of adult meals were not collected for Year Three.

MEAL PRICES

This section presents national estimates of the prices charged by SFAs participating in the NSLP and SBP during SY 1988-89, SY 1989-90, and SY 1990-91. Average prices charged in different types of SFAs are compared and the statistical significance of differences among subgroups of SFAs and year-to-year changes are noted.1/ Prices for the NSLP and SBP are discussed separately, beginning with the NSLP.

NSLP Paid Lunches

The price for a full price NSLP meal, across all schools and SFAs, has risen over time from 98 cents in SY 1988-89, to $1.00 in SY 1989-90, and again to $1.08 in SY 1990-91 (Exhibit III.1). Paid lunch prices vary by grade level. The average lunch price in elementary schools was 93 cents in SY 1988-89, 95 cents in SY 1989-90, and $1.02 in SY 1990-91. For middle/secondary schools, the average price was $1.03 in SY 1988-89, $1.06 in SY 1989-90, and $1.16 in SY 1990-91. There also is variation in meal pricing in different types of SFAs. Specifically, prices charged in SFAs that participate in the SBP and in SFAs that serve 60 percent or more free or reduced-price lunches are significantly lower--in both elementary and middle/secondary schools--than prices in other SFAs.

Exhibit III.2 shows how the average price of an NSLP paid lunch in SY 1990-91 changes when the unit of analysis is the NSLP meal (each lunch has the same weight) instead of the SFA (each SFA has the same weight). Large SFAs charge higher prices and serve many more lunches than small SFAs, hence the mean lunch price calculated using the NSLP meal as the unit of analysis is marginally higher ($1.12) than the mean lunch price calculated using the SFA as the unit of analysis ($1.08).

1/The unweighted sample sizes are quite small for some subgroups of SFAs, especially middle/secondary schools in private SFAs. Estimates are not provided when unweighted cell sizes fall below 30 SFAs.

Exhibit III.1

Average NSLP Meal Prices for Paid Lunches in Elementary and Middle/Secondary Schools (SY 1988-89, SY 1989-90, and SY 1990-91)

	Elementary Schools				Middle/Secondary Schools				All Schools			
	SY 1988-89 (a)	SY 1989-90 (b)	SY 1990-91 (c)	(c-a)	SY 1988-89 (d)	SY 1989-90 (e)	SY 1990-91 (f)	(f-d)	SY 1988-89 (g)	SY 1989-90 (h)	SY 1990-91 (i)	(i-g)
TOTAL SAMPLE	$0.93	$0.95	$1.02	$0.09*	$1.03	$1.06	$1.16	$0.13*	$0.98	$1.00	$1.08	$0.10*
Type of SFA												
Public	0.93	0.95	1.03	0.10*	1.02	1.06	1.14	0.12*	0.97	1.01	1.09	0.12*
Private	0.93	0.93	0.99	0.06*	na	na	na	na	0.99	0.98	1.04	0.05
Participation in SBP												
NSLP and SBP	0.87*	0.91	0.96	0.09*	0.96*	1.01	1.08	0.12*	0.91*	0.96	1.02	0.11*
NSLP only	0.95	0.97	1.06	0.11*	1.06	1.09	1.22	0.16*	1.00	1.02	1.11	0.10*
SFA Size												
Small (1-999)	0.92	0.92	0.99	0.07*	1.01	1.01	1.09	0.08*	0.96	0.96	1.03	0.07*
Medium (1,000-4,999)	0.94	0.97	1.05	0.11*	1.03	1.09	1.18	0.15*	0.99	1.03	1.12	0.13*
Large (5,000+)‡	0.94	0.96	1.06	0.12*	1.06	1.08	1.20	0.14*	1.00	1.03	1.14	0.14*
Poverty Level of SFA												
60% or more F&R	0.85*	0.89	0.91	0.06	0.87*	0.93	0.92	0.05	0.88*	0.92	0.95[1]	0.07
0-59% F&R	0.94	0.96	1.05	0.11*	1.06	1.10	1.21	0.15*	0.99	1.02	1.10	0.11*

*Between-group or year-to-year difference is statistically significant at the .01 level. Between-group comparisons were done for Year One but not for Year Two or Ye Three.

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

[1]Mean for all schools can be greater than mean for elementary and secondary schools due to missing data.

na: Unweighted sample size less than 30 SFAs.

Data Source: Year One, Year Two and Year Three SFA Manager Surveys.

Exhibit III.2

Average NSLP Meal Prices for Paid Lunches Using Two Different Units of Analysis (SY 1990-91)

	Unit of Analysis	
	SFA[1]	NSLP Meal[2]
Total Sample	$1.08	$1.12
Type of SFA		
Public	1.09	1.12
Private	1.04	1.07
Participation in SBP		
NSLP and SBP	1.02	1.11
NSLP only	1.11	1.14
SFA Size		
Small (1-999)	1.03	1.05
Medium (1,000-4,999)	1.12	1.14
Large (5,000+)	1.14	1.12
SFA Poverty Level		
60% or more F&R	0.95	0.95
0-59% F&R	1.10	1.15

Data Source: Year Three SFA Manager Survey

[1]Average price across all SFAs in the nation. Equal weight is given to each SFA, regardless of size.

[2]Average price across all lunches served in the nation. Equal weight is given to each lunch, hence the average price is dominated by the prices charged by large SFAs.

Exhibit III.3 summarizes information about price increases for *full-price* lunches across the four years of data available from this study.1/ The percentage of SFAs raising prices has increased in each year of the study. If we consider elementary school lunch prices, 28 percent of SFAs raised prices from SY 1987-88 to SY 1988-89, 41 percent raised prices from SY 1988-89 to SY 1989-90, and 55 percent raised prices from SY 1989-90 to SY 1990-91. Considering middle/secondary school prices, 36 percent of SFAs raised prices from SY 1987-88 to SY 1988-89, 55 percent raised prices from SY 1988-89 to SY 1989-90, and 57 percent raised prices from SY 1989-90 to SY 1990-91.

The size of the price increases (computations were based only on those SFAs that raised prices) in elementary schools averaged 11 cents from SY 1987-88 to SY 1988-89, 10 cents from SY 1988-89 to SY 1989-90, and then jumped to 13 cents from SY 1989-90 to SY 1990-91. A similar pattern was observed in middle/secondary schools, with increases over time of 11 cents, 11 cents, and 15 cents.2/

These findings raise questions about patterns of price changes over time as well as the relationship between price changes at the elementary level and at the middle/secondary level. Exhibit III.4 is based on a longitudinal data set restricted to SFAs that provided price data for elementary and middle/secondary schools for each of SY 1987-88, SY 1988-89, SY 1989-90, and SY 1990-91. One clear finding is that pricing behavior is consistent across elementary and middle/secondary schools. That is, regardless of whether an SFA is going to hold prices constant or is going to raise prices, it usually follows the same behavior for both elementary and secondary schools. This conclusion holds for lunch prices in 76 percent of all SFAs and for breakfast prices in 94 percent of all SFAs. The exhibit shows details on the patterns of

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1/During the first year of the study, data were collected for SY 1988-89 and for the preceding year (SY 1987-88). During the next two years of the study, data were collected for SY 1989-90 and SY 1990-91. The analyses presented here are based on all SFAs which provided data for pairs of consecutive years. Thus, an SFA which provided price data for SY 1987-88 and SY 1988-89, but not for SY 1989-90 would be included in the analysis of prices and price increases comparing SY 1987-88 to SY 1988-89 but not in the analysis comparing SY 1988-89 to SY 1989-90. A sub-analysis was conducted on the subset of SFAs that provided price data for all years of the study. This analysis leads to the same conclusions as the analysis presented in this report.

2/Because a full-price school lunch costs about one dollar, the percentage change is about the same as the absolute change. For example, an increase of 11 cents is roughly equivalent to an 11% increase.

Exhibit III.3

Summary of NSLP Price Increase Data for Full-Price Lunches (SY 1988-89 to SY 1989-90 to SY 1990-91)

	SY 1987-88 to SY 1988-89 (Year 0 to Year 1)		SY 1988-89 to SY 1989-90 (Year 1 to Year 2)		SY 1989-90 to SY 1990-91 (Year 2 to Year 3)		SY 1988-89 to SY 1990-91 (Year 1 to year 3)	
	Elementary	Secondary	Elementary	Secondary	Elementary	Secondary	Elementary	Secondary
Percent of SFAs that Increased Prices[1]	28%	36%	41%	55%	55%	57%	67%	79%
Mean Increase[2]	$.11	$.11	$.10	$.11	$.13	$.15	$.15	$.18
Median Increase[2]	$.10	$.10	$.10	$.10	$.10	$.12	$.15	$.17
Modal Increase[2]	$.10	$.09	$.10	$.05	$.10	$.09	$.10	$.14

[1]Based on SFAs that provided price data in a given pair of years.

[2]Based only on SFAs that reported a price increase.

Data Source: Year One, Year Two, and Year Three SFA Manager Surveys.

Exhibit III.4

Patterns of Price Change in the NSLP and SBP Across Three Possible Change Periods: SY 1987-88 to SY 1988-89, SY 1988-89 to SY 1989-90, SY 1989-90 to SY 1990-91

Type of Price Change	Lunch	Breakfast
No change in any of 3 years	13%	49%
Increase in 1 of 3 years	27	41
SY 1987-88 to SY 1988-89	4	6
SY 1988-89 to SY 1989-90	10	18
SY 1989-90 to SY 1990-91	13	17
Increase in 2 of 3 years	25	2
SY 1987-88 to SY 1988-89 and SY 1988-89 to SY 1989-90	3	1
SY 1987-88 to SY 1988-89 and SY 1989-90 to SY 1990-91	10	0
SY 1988-89 to SY 1989-90 and SY 1989-90 to SY 1990-91	12	1
Increase in all 3 years	11	2
Subtotal (Elementary and Secondary Schools Follow the Same Behavior)	76	94
Subtotal (Elementary and Secondary Schools Do Not Follow the Same Behavior)	24	6
TOTAL	100	100
Total Weighted N	4,624	1,240

Ns and percentages based on SFAs that supplied price data for elementary and secondary schools in each year.

Data Source: Year One, Year Two and Year Three SFA Manager Surveys.

price changes for the majority of SFAs where elementary and middle/secondary schools follow identical price behaviors. With respect to lunch prices:

- 13 percent of the SFAs did not increase lunch prices in either elementary or middle/secondary schools in any of the three years;
- 27 percent of the SFAs increased lunch prices once in both elementary and middle/secondary schools during the three year period;
- 25 percent of the SFAs increased lunch prices twice in both elementary and middle/secondary schools during the three year period; and
- 11 percent of the SFAs increased lunch prices in both elementary and middle/secondary schools in each of the three years.

For breakfast, a very different pattern is observed due to the fact that there is a ceiling on breakfast prices:

- 49 percent of the SFAs did not increase breakfast prices in either elementary or middle/secondary schools in any of the three years;
- 41 percent of the SFAs increased breakfast prices once in both elementary and middle/secondary schools during the three year period;
- 2 percent of the SFAs increased breakfast prices twice in both elementary and middle/secondary schools during the three year period; and
- 2 percent of the SFAs increased breakfast prices in both elementary and middle/secondary schools in each of the three years.

Exhibit III.5 presents details on the price increases observed between the last two years of the CNOPS study (SY 1989-90 to SY 1990-91). Public SFAs, large and medium SFAs, and SFAs that serve 59 percent or fewer free or reduced-price meals were more likely to raise lunch prices than private SFAs, small SFAs, and SFAs that serve 60 percent or more free or reduced-price meals. The average price increase was 13 cents in elementary schools and 15 cents in middle/secondary schools. The median increase was lower than the mean, 10 cents in elementary schools and 12 cents and secondary schools. Finally, the modal (most common) increase was 10 cents in elementary

Exhibit III.5

Percentage of SFAs That Increased Price of a Paid Lunch and Size of Increase (SY 1989-90 to SY 1990-91)

	Elementary				Secondary			
	Percent That Increased Prices[1]	Mean Increase[2]	Median Increase[2]	Modal Increase[2]	Percent That Increased Prices[1]	Mean Increase[2]	Median Increase[2]	Modal Increase[2]
Total Sample	55%	$.13	$.10	$.10	57%	$.15	$.12	$.09
Type of SFA								
Public	57*	.13	.10	.05	59*	.15	.12	.09
Private	46	.11	.10	.15	5	.21	.24	.25
Participation in SBP								
NSLP & SBP	53	.13	.10	.10	55	.15	.13	.14*
NSLP Only	56	.13	.10	.10	60	.15	.10	.09
SFA Size								
Small (1-999)	51*	.11*	.10	.10	48*	.13	.10*	.09
Medium (1000-4999)	57*	.14	.10	.10	59	.16	.13	.09
Large (5000+)	62	.15	.10	.15	65	.16	.14	.14
SFA Poverty Level								
60% or more F&R	30*	.09*	.09	.10	32*	.14	.12	.04
0-59% F&R	60	.13	.10	.10	63	.15	.12	.09
Total SFAs (weighted)	10,549	10,549	10,549	10,549	7,371	7,371	7,371	7,371

[1]Based on SFAs that provided price data in both years.

[2]Based only on SFAs that reported a price increase.

Data Source: Year Two and Year Three SFA Manager Surveys.

schools and 9 cents in middle/secondary schools.1/ The average size of the increase was larger in large and medium SFAs and in SFAs that serve 59 percent or fewer free or reduced-price meals than in small SFAs and SFAs that serve 60 percent or more free or reduced-price meals.

There are also important distributional changes in the prices charged for paid lunches. As indicated in Exhibit III.6, the percentage of SFAs in which elementary schools charge $1.00 or more for lunch increased from 41 percent in SY 1988-89 to 59 percent by SY 1990-91. For middle/secondary schools (Exhibit III.7) the percentage change for SFAs charging $1.00 or more for lunch is even greater, from 58 percent in SY 1988-89 to 78 percent in SY 1990-91.

Part of the observed increases from SY 1989-90 to SY 1990-91 could be the result of reductions in the level of USDA bonus commodity donations as well as increases in wholesale food prices. Discussion of this issue is contained in Chapter 4 of this report.

NSLP Reduced-Price Lunches

The price for a reduced-price lunch in each of the three years, was about 38 cents (Exhibit III.8). There is little variation in this figure across different types of SFAs, with average prices ranging between 36 and 38 cents for a reduced-price lunch. There were no significant changes in the price of a reduced-price lunch from SY 1988-89 to SY 1990-91. Due to the Federally-set ceiling on the price of a reduced-price lunch, the standard deviation of the price for a reduced-price lunch is much smaller than for the price of a paid lunch--about 6 cents per reduced-price lunch compared to 20 cents for a paid lunch. This means that there is relatively little variation in the price of a reduced-price lunch within any of the subgroups examined in this study.

SBP Paid Breakfasts

The average price of an SBP paid breakfast across all SFAs was 54 cents in SY 1990-91 (Exhibit III.9), with little difference between prices in elementary and middle/secondary schools. In SY 1988-89, small SFAs and SFAs that serve 60 percent or more free or reduced price lunches each charged lower prices for full price breakfasts in middle/secondary schools than did large SFAs or SFAs that serve 59 percent or fewer free or reduced-price lunches. These significant differences persist into SY 1989-90 and SY 1990-91.

The price of a paid breakfast increased significantly between SY 1988-89 and SY 1990-91, from 49 cents to 54 cents across all schools. Significant price

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1/The modal increase of 9 cents is a bit misleading. Price increases for middle/secondary schools were calculated as an average of middle and secondary school increases. Because of this averaging, the modal increase is 9 cents rather than a more intuitively appealing 10 cents.

Exhibit III.6

Distribution of NSLP Meal Prices for Paid Lunches in Elementary Schools (SY 1988-89, SY 1989-90, and SY 1990-91)

Lunch Price	School Year		
	SY 1988-89	SY 1989-90	SY 1990-91
< $.50	1%	0%	0%
$.50 - $.59	2	1	1
$.60 - $.69	4	5	5
$.70 - $.79	14	12	7
$.80 - $.89	17	19	8
$.90 - $.99	21	15	17
$1.00 - $1.09	23	24	31
$1.10 - $1.19	8	10	5
$1.20 - $1.29	7	10	18
$1.30 - $1.39	1	2	3
$1.40 - $1.49	1	1	2
> $1.50	1	1	3
Total SFAs (weighted)	12,262	12,175	13,015

Data Source: Year Three SFA Manager Survey

Exhibit III.7

Distribution of NSLP Meal Prices for Paid Lunches in Middle/Secondary Schools (SY 1988-89, SY 1989-90, and SY 1990-91)

Lunch Price	School Year		
	SY 1988-89	SY 1989-90	SY 1990-91
< $.50	0%	0%	0%
$.50 - $.59	1	0	0
$.60 - $.69	2	4	3
$.70 - $.79	11	9	9
$.80 - $.89	9	10	5
$.90 - $.99	19	7	4
$1.00 - $1.09	21	27	27
$1.10 - $1.19	15	15	7
$1.20 - $1.29	11	14	17
$1.30 - $1.39	5	6	9
$1.40 - $1.49	2	3	3
> $1.50	4	5	15
Total SFAs (weighted)	9,695	9,552	9,476

Data Source: Year Three SFA Manager Survey

Exhibit III.8

Average NSLP Meal Prices for Reduced-Price Lunches in Elementary and Middle/Secondary Schools (SY 1988-89, SY 1989-90, and SY 1990-91)

	Elementary Schools				Middle/Secondary Schools				All Schools			
	SY 1988-89 (a)	SY 1989-90 (b)	SY 1990-91 (c)	(c-a)	SY 1988-89 (d)	SY 1989-90 (e)	SY 1990-91 (f)	(f-d)	SY 1988-89 (g)	SY 1989-90 (h)	SY 1990 91 (i)	(i g)
TOTAL SAMPLE	$0.38	$0.38	$0.38	$0.00	$0.38	$0.38	$0.37	$-0.01	$0.38	$0.38	$0.38	$0.00
Type of SFA												
Public	0.38	0.38	0.38	0.00	0.38	0.38	0.37	-0.01	0.38	0.38	0.38	0.00
Private	0.38	0.38	0.39	0.01	na	na	na	na	0.38	0.38	0.39	0.01
Participation in SBP												
NSLP and SBP	0.36	0.37	0.37	0.01	0.36	0.37	0.36	0.00	0.36	0.37	0.37	0.01
NSLP only	0.38	0.38	0.39	0.01	0.38	0.39	0.37	-0.01	0.38	0.38	0.38	0.00
SFA Size												
Small (1-999)	0.38	0.38	0.39	0.01	0.38	0.39	0.37	-0.01	0.38	0.38	0.38	0.00
Medium (1,000-4,999)	0.38	0.38	0.38	0.00	0.38	0.38	0.37	-0.01	0.38	0.38	0.38	0.00
Large (5,000+)‡	0.36	0.36	0.37	0.01	0.37	0.36	0.36	-0.01	0.37	0.36	0.36	-0.01
Poverty Level of SFA												
60% or more F&R	0.37	0.37	0.39	0.02	0.38	0.38	0.37	-0.01	0.38	0.38	0.39	0.01
0-59% F&R	0.38	0.38	0.38	0.00	0.38	0.38	0.37	-0.01	0.38	0.38	0.38	0.00

*Between-group or year-to-year difference is statistically significant at the .01 level. Between-group comparisons were done for Year One but not for Year Two or Ye: Three.

‡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, Year Two and Year Three SFA Manager Surveys.

Exhibit III.9

Average SBP Meal Prices for Paid Breakfasts in Elementary and Middle/Secondary Schools (SY 1988-89, SY 1989-90, and SY 1990-91)

	Elementary Schools				Middle/Secondary Schools				All Schools			
	SY 1988-89 (a)	SY 1989-90 (b)	SY 1990-91 (c)	(c-a)	SY 1988-89 (d)	SY 1989-90 (e)	SY 1990-91 (f)	(f-d)	SY 1988-89 (g)	SY 1989-90 (h)	SY 1990-91 (i)	(i-g)
TOTAL SAMPLE	$0.48	$0.50	$0.52	$0.04*	$0.50	$0.52	$0.55	$0.05	$0.49	$0.51	$0.54	$0.05*
Type of SFA												
Public	0.48	0.50	0.52	0.04*	0.50	0.52	0.55	0.05	0.49	0.51	0.54	0.05*
Private	0.56	0.50	0.51	-0.05	na	na	na	na	0.55	0.51	0.52	0.03
SFA Size												
Small (1-999)	0.44	0.46	0.49	0.05	0.39*	0.48	0.50	0.11*	0.44*	0.48	0.50	0.06
Medium (1,000-4,999)	0.49	0.50	0.53	0.04	0.51	0.52	0.56	0.05	0.50	0.51	0.55	0.05*
Large (5,000+)‡	0.51	0.53	0.55	0.04	0.55	0.56	0.59	0.04	0.53	0.54	0.57	0.04
Poverty Level of SFA												
60% or more F&R	0.45	0.46	0.47	0.02	0.43*	0.45	0.47	0.03	0.45*	0.46	0.47	0.02
0-59% F&R	0.50	0.52	0.56	0.06*	0.53	0.56	0.60	0.07*	0.51	0.53	0.58	0.07*

*Between-group or year-to-year difference is statistically significant at the .01 level. Between-group comparisons were done for Year One but not for Year Two or Year Three.

‡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, Year Two and Year Three SFA Manager Surveys.

increases were seen for several subgroups including public SFAs, medium-sized SFAs, and SFAs that serve 59 percent or fewer free or reduced-price lunches. Significant increases were also seen at the elementary school level for all SFAs, public SFAs, and SFAs that serve 59 percent or fewer free or reduced-price lunches, and at the secondary school level (for small SFAs and SFAs that serve 59 percent or fewer free or reduced-price lunches).

SBP Reduced-Price Breakfasts

Data on prices charged for reduced-price breakfasts are displayed in Exhibit III.10. Across all schools, prices are unvarying across SFA subgroups from SY 1988-89 to SY 1990-91. On average, SFAs charge 26 cents for a reduced-price breakfast. However, there are statistically significant price increases for reduced-price breakfasts in elementary schools across all SFAs (2 cent increase), for public SFAs (3 cent increase), and for SFAs that serve 59 percent or fewer free or reduced-price lunches (1 cent increase). At the middle/secondary school level, SFAs that serve 60 percent or more free or reduced price lunches increased prices significantly (by 3 cents).

Exhibit III.10

Average SBP Meal Prices for Reduced-Price Breakfasts in Elementary and Middle/Secondary Schools (SY 1988-89, SY 1989-90, and SY 1990-91)

	Elementary Schools				Middle/Secondary Schools				All Schools			
	SY 1988-89 (a)	SY 1989-90 (b)	SY 1990-91 (c)	(c-a)	SY 1988-89 (d)	SY 1989-90 (e)	SY 1990-91 (f)	(f-d)	SY 1988-89 (g)	SY 1989-90 (h)	SY 1990-91 (i)	(i-g)
TOTAL SAMPLE	$0.25	$0.26	$0.27	$0.02*	$0.25	$0.26	$0.27	$0.02	$0.26	$0.26	$0.27	$0.01
Type of SFA												
Public	0.25	0.26	0.28	0.03*	0.25	0.26	0.27	0.02	0.25	0.26	0.27	0.02
Private	0.27	0.23	0.25	-0.02	na	na	na	na	0.27	0.23	0.25	0.02
SFA Size												
Small (1-999)	0.25	0.26	0.28	0.03	0.23	0.26	0.28	0.05	0.25	0.26	0.28	0.03
Medium (1,000-4,999)	0.26	0.26	0.28	0.02	0.25	0.26	0.27	0.02	0.26	0.26	0.28	0.02
Large (5,000+)‡	0.26	0.26	0.27	0.01	0.26	0.26	0.27	0.01	0.26	0.26	0.27	0.01
Poverty Level of SFA												
60% or more F&R	0.25	0.25	0.28	0.03	0.24	0.25	0.27	0.03*	0.25	0.25	0.27	0.02
0-59% F&R	0.26	0.26	0.27	0.01*	0.26	0.27	0.27	0.01	0.26	0.26	0.27	0.01

*Between-group or year-to-year difference is statistically significant at the .01 level. Between-group comparisons were done for Year One but not for Year Two or Ye Three.

‡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, Year Two and Year Three SFA Manager Surveys.

SECTION IV
THE FOOD DONATION PROGRAM

This section presents findings on Food Donation Program (FDP) operations at the SFA level. Issues include the use of direct delivery of commodities, use of donated flour and hamburger patties, buying cycles, and the effect of changes in the level of bonus commodity donations.

BACKGROUND

The FDP involves the donation and distribution of surplus agricultural commodities as well as preferred items to a variety of eligible agencies. Through the Child Nutrition Programs, schools receive the majority of donated commodities and therefore support the need to provide an outlet for domestic agricultural products. However, over the years there have been frequent requests from local administrators to change and improve the program to better meet the needs of school food service programs. The Commodity Distribution Reform Act of 1987 (P.L. 100-237) enacted numerous procedural changes designed to improve program operations and service to SFAs. Key provisions of this legislation focused on (1) encouraging SFAs to purchase, whenever possible, only food products produced in the U.S., (2) improving State Distributing Agents' communication and overall performance, and (3) requiring that State Distribution Agencies use commercial facilities for warehousing and distribution services unless a waiver is obtained.

In recent years, USDA has made a considerable effort to improve the FDP. Product changes have been made, delivery procedures improved, the use of commercial vendors to deliver donated foods has increased, and technical assistance has been provided to allow States and SFAs to make better use of donated foods and to lower the costs of storage. The need for program refinement continues, as does the need for appropriate data to inform decision making in this area.

KEY RESEARCH ISSUES

The following research questions were developed to address FNS-identified priorities:

- What types of advanced notification do SFAs receive of donated commodity deliveries?
- How do SFAs make use of commodity flour?
- Do SFAs process donated beef into hamburger patties? If so, why don't they accept USDA donated patties?

- When in the year do SFAs receive donated commodities? What changes do they recommend?

- What is the effect of recent changes in the level of donated bonus commodities?

DATA AND VARIABLES

Information on SFA-level operations was gathered through the Year Three SFA Manager Telephone Survey. SFA managers were asked about the notification they receive prior to the delivery of donated commodities. They were also asked how they currently make use of donated flour, particularly through processing contracts.

The survey also included questions about SFA processing of donated ground beef and why SFAs did not use USDA patties. In addition, the survey included extensive questions about recommended changes to commodity delivery cycles and the effect of recent reductions in donated bonus commodities on SFA operations.

DIRECT DELIVERY OF USDA COMMODITIES

The purpose of the Commodity Distribution Reform Act and WIC Amendments of 1987 (P.L. 100-237) was to improve the manner in which commodities purchased by the Department are distributed to recipient agencies, improve the quality of commodities, and ensure that such distribution is responsive to the needs of the recipient agencies while still carrying out the Department's responsibilities to support agricultural prices and remove surpluses from the market. The Year Two survey collected data on State Agency commodity delivery systems. In Year Three, additional information was collected regarding the performance of the delivery systems used by 57 SFAs. Thirty-eight of these were the largest SFAs that receive commodities directly from USDA. The other 19 were identified during the telephone interview as having direct delivery. In particular, the survey focused on problems related to the scheduling of these shipments and problems caused by notification practices.

Because of the small number of SFAs that answered these questions, and the fact that they were not representatively selected, the analysis here simply reports unweighted numbers and percentages of SFAs that answered the questions. In several cases, the number of valid responses is too small for meaningful analysis.

The 57 SFA Managers were first asked how often they received written notification about delivery of commodities. Forty-five (79%) of the SFAs said that they received advance notification all of the time, and another 9 (16%) received notification most of the time. Only three SFAs (5%) never received written notice or only received it some of the time. SFA Managers were also asked how many days in advance they receive written notification. Seven SFAs (13%) received seven days notification, nine SFAs (16%) received between eight and 29 days notification, 33 SFAs (59%) received 30 days written notification, and five SFAs (9%) received more than 30 days notification.

The 11 SFAs that received written notice sometimes but not always were asked what percentage of commodities arrive without advance written notice. Seven of the 11 indicated that only a small percentage of commodities (0% - 19%) arrived without written notice. Further, there are no particular commodities that seemed to cause special problems with respect to written notice.

The 57 SFA Managers were further queried as to who notified them about impending deliveries. Fifty-four (95%) identified their state agency as the notifying agent. The remainder were the 5 percent of SFA Managers who reported that they did not receive notification.

Twenty-nine of the SFAs (51%) report that they pick up their commodities. In the remaining SFAs, commodities are delivered to the SFA by trucks with a varying degree of advanced notice. In 11 SFAs (19%) truck drivers call all of the time for an appointment, in three SFAs (5%) truck drivers call most of the time, in five SFAs (9%) truck drivers call some of the time, and in nine SFAs (16%) truck drivers never call.

The eight SFAs where truck drivers called sometimes but not always were asked some followup questions about the percentage of deliveries that arrive without unloading appointments, whether drivers call for appointments for certain types of commodities, which types of commodities arrive without unloading appointments, and how many hours in advance drivers call to schedule unloading appointments. There were too few responses (maximum of eight) to yield useful information on these questions.

COMMODITY PROCESSING

USDA needs to know how SFAs utilize commodity flour, i.e., how much of it is used in-house vs. processed into other products by outside processors, and which specific products are made with commodity flour. In addition, data from the first year of this study suggest that many SFAs are processing ground beef into hamburger patties. USDA needs to know why SFAs don't

order USDA beef patties (with VPP or not). If it is because of the specification of the USDA beef patty, then perhaps the specification can be changed to better meet the needs of SFAs. If SFAs are under the misconception that only a certain percentage of their beef allocation can be in the form of hamburger patties then further clarification needs to occur.

Commodity Flour

SFA Managers were asked a series of questions concerning their use of USDA commodity flour during SY 1990-91. The questions inquired about in-house use of flour, use of commodity flour by food processors, and use of commodity flour through National Commodity Processing. It should be understood that flour, while still available as an entitlement commodity, is no longer provided to schools as a bonus item.

Exhibit IV.1 shows that almost all SFAs (96%) report that they receive USDA commodity flour. Of those SFAs that receive USDA flour, most (89%) report that they use all of their commodity flour in-house, for preparation of food items in their own kitchens. The remainder of the SFAs (10%) report that they send all of their commodity flour to food processors, to be used in preparing food items. There are no significant differences among subgroups of SFAs in terms of use of flour in-house or with food processors. Finally, 42% of the SFAs report that they use some food items containing USDA flour which are produced under a National Commodity Processing contract. Public SFAs are more likely than private SFAs and large and medium SFAs are more likely than small SFAs to purchase NCP items containing flour.

Exhibit IV.2 lists the food items made in-house by SFAs that use any commodity flour in their own kitchens. The most commonly prepared food items were cakes, pies and cookies (95% of SFAs), bread and rolls (78%), and muffins and biscuits (54%). Other food items containing commodity flour that are prepared in school kitchens included pizza (23%), gravy (17%), and batter (5%).

Similar information on food items containing USDA flour that are purchased by SFAs through food processors is presented in Exhibit IV.3. The most commonly-purchased items are bread and rolls (74% of SFAs), pizza (73%), cakes, pies and cookies (40%), muffins and biscuits (38%), and crackers (23%). These percentages are based on the subset of SFAs that purchase foods containing USDA flour from food processors and would be much smaller (about one-tenth of the indicated percentages) if they were based on all SFAs in the country.

Finally, Exhibit IV.4 lists the food items containing commodity flour which are purchased through NCP. The most popular NCP item containing flour is pizza crust which is purchased by 77% of SFAs that use NCP items. Other NCP foods containing flour include bread and rolls (29% of SFAs), cakes, pies and cookies (16%), crackers and pretzels (14%), muffins and biscuits

Exhibit IV.1

SFA Receipt and Use of Commodity Flour
(SY 1990-91)

	Percent of SFAs			
	That Receive USDA Commodity Flour	**That Use All USDA Flour In-House[1]**	**That Send All USDA Flour to Processors[1]**	**That Use NCP Items Containing USDA Flour[1]**
TOTAL SAMPLE	96%	89%	10%	42%
Type of SFA				
Public	97	89	10	49*
Private	93	88	10	14
Participation in SBP				
NSLP and SBP	98	91	9	45
NSLP only	94	87	10	40
SFA Size				
Small (1-999)	94	89	9	26*
Medium (1,000-4,999)	98	88	10	53
Large (5,000+)‡	97	88	12	64
SFA Poverty Level				
60% or more F&R	99	87	13	27
0-59% F&R	95	89	9	44
Total SFAs (Weighted)	15,605	14,630	14,581	15,193

[1]These columns represent percentages of SFAs that receive commodity flour.

*Group difference 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 Three SFA Manager Survey.

Exhibit IV.2

Food Items Made in SFA Kitchens Using USDA Flour
(SY 1990-91)

Food Item	Percent of SFAs
Cakes, pies, cookies	95%
Breads, rolls	78
Muffins, biscuits	54
Pizza	23
Gravy	17
Batter	5
Other	3
Total SFAs (Weighted)	14,549

Ns and percentages reflect SFAs that received commodity flour and that used it in-house.

Data Source: Year Three SFA Manager Survey.

Exhibit IV.3

Food Items Prepared by Food Processors Using USDA Flour
(SY 1990-91)

Food Item	Percent of SFAs
Breads, rolls	74%
Pizza	73
Cakes, pies, cookies	40
Muffins, biscuits	38
Crackers	23
Other	3
Total SFAs (Weighted)	1,755

Ns and percentages reflect SFAs that received commodity flour and that had it processed by a commercial food processor.

Data Source: Year Three SFA Manager Survey.

Exhibit IV.4

Food Items Prepared Through National Commodity Processing
Using USDA Flour
(SY 1990-91)

Food Item	Percent of SFAs
Pizza crust	77%
Breads, rolls	29
Cakes, pies, cookies	16
Crackers, pretzels	14
Muffins, biscuits	8
Pasta products	3
Tortilla shells	2
Total SFAs (Weighted)	6,317

Ns and percentages reflect SFAs that purchased products under NCP which contained USDA flour.

Data Source: Year Three SFA Manager Survey.

(8%), pasta products (3%), and tortilla shells (2%). These percentages are based on the subset of SFAs that use NCP items containing flour and would be smaller (less than half of the indicated percentages) if based on all SFAs in the nation.

Beef Patties

SFA Managers were also asked a series of questions about the use of beef patties. These included questions about whether SFAs had processing agreements for beef patties, and if so, why they did not order all their patties from USDA, which currently offers three types of beef patties: frozen beef patties, frozen beef patties with VPP, and frozen extra lean beef patties.

Exhibit IV.5 shows that over two-thirds (68%) of all SFAs prefer USDA patties over other available patties (either from a commercial vendor or prepared by the SFA). On the other hand, 19% of all SFAs have a processing agreement for the preparation of hamburger patties. There are no significant differences across subgroups of SFAs on either of these variables.

SFAs that have a processing agreement for hamburger patties were asked to list the reasons that they do not order all of their patties from USDA (see Exhibit IV.6). The main reasons are related to a perceived lack of or unawareness of availability: the state restricts orders (21% of SFAs), the SFA cannot get enough patties (21%), patties are not offered (17%), and the SFA is unaware that patties are available (12%). Other reasons are related to preferences including disliking the texture of the USDA patty (16%), general dislike of the patty (10%), dislike the shape of the patty (6%), the patty is too high in fat (6%), dislike the size of the patty (2%), and want to use TVP. (2%). These percentages are based on the 19% subset of SFAs that had a processing agreement, and would be much smaller if based on the total number of SFAs in the nation.

The 32% of SFAs that either order hamburger patties from a commercial vendor or make their own patties were asked why these patties were preferred over USDA patties. Almost all of the reasons related to the quality of the patties (Exhibit IV.7). The most frequently cited reason was that these patties taste better and are of higher quality (39%). Two other reasons were cited fairly often: commercial and school-prepared patties are available in precooked form (14%) and are lower in fat (13%). Finally, several other reasons were cited by 4%-6% of the SFAs including better consistency, do not shrink as much, students prefer, better size or shape, better packaging or case size, and more reliable delivery.

Finally, the 68% of SFAs that prefer USDA patties were asked why these patties were preferred over other types (Exhibit IV.8). Two reasons stood out: USDA patties are "free" (40%) to the SFA since local food dollars do not have to be used to acquire them, and USDA patties are of higher quality (28%). Several other reasons were cited by between 1% and 7% of the SFAs

Exhibit IV.5

SFA Use of Hamburger Patties
(SY 1990-91)

	Percent of SFAs	
	That Have a Processing Agreement for Hamburger Patties	**That Prefer USDA Patties**
TOTAL SAMPLE	19%	68%
Type of SFA		
Public	20	66
Private	17	74
Participation in SBP		
NSLP and SBP	17	60
NSLP only	21	72
SFA Size		
Small (1-999)	17	72
Medium (1,000-4,999)	18	66
Large (5,000+)‡	30	60
SFA Poverty Level[1]		
60% or more F&R	18	65
0-59% F&R	20	68
Total SFAs (Weighted)	15,441	13,412

*Group difference 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 Three SFA Manager Survey.

Exhibit IV.6

Reasons For Not Ordering All Hamburger Patties From USDA
(SY 1990-91)

Reason	Percent of SFAs That Have a Processing Agreement
State restricts orders	21%
Can't get enough	21
Patties not offered	17
Dislike texture of patty	16
Unaware of availability	12
General dislike of patty	10
Dislike shape of patty	6
Patties too high in fat	6
Dislike size of patty	2
Want to incorporate TVP	2
Total SFAs (Weighted)	2,969

Ns and percentages are based on the 19% of SFAs that have a processing agreement for the preparation of hamburger patties.

Data Source: Year Three SFA Manager Survey.

Exhibit IV.7

Reasons Why Commercial Patties are Preferred
(SY 1990-91)

Reason	Percent of SFAs
Taste better, higher quality	39%
Precooked patties available	14
Lower in fat	13
Better consistency, appearance	6
Don't shrink as much	5
Students prefer	5
Better size, shape	5
Better packaging, case size	4
More reliable delivery	4
Total SFAs (Weighted)	4,347

Ns and percentages are based on SFAs that prefer patties from commercial vendors.

Data Source: Year Three SFA Manager Survey.

Exhibit IV.8

Reasons Why USDA Patties are Preferred
(SY 1990-91)

Reason	Percent of SFAs
USDA patties are "free" (local food dollars are not required)	40%
Higher quality	28
Better taste	7
Lower in fat	7
Better size, shape	6
Use less labor	5
Contain less TVP	1
Total SFAs (Weighted)	9,064

Ns and percentages are based on SFAs that prefer USDA patties.

Data Source: Year Three SFA Manager Survey.

including better taste, lower fat, better size or shape, use less labor, and contain less VPP.

USDA Purchasing Cycles

At a recent National Advisory Council on Commodity Distribution, considerable discussion focused on the ability of USDA to provide school districts with donated commodities at the beginning of the school year. Although a considerable amount of commodities is purchased in the first two quarters of the school year, shipments to States and school districts often extend well into the third or fourth quarter. This is in part due to funding cycles (USDA purchases on a fiscal year basis, not a school year basis), as well as the availability of these commodities at appropriate prices.

SFA directors serving on this Advisory Council indicated a preference to receive more commodities early in the school year. Not only would they be able to better plan menu cycles, but the availability of these donated commodities would relieve some of the financial burden placed on school districts early in the school year when they must purchase these products commercially.

USDA is currently examining various alternatives that might address these concerns. However, before engaging in alternative buying cycles, USDA needs to know SFAs' desires and abilities to accommodate such changes.

SFA Managers were asked questions concerning the pattern in which they received their USDA commodities during the current (1990-91) school year. Exhibit IV.9 displays the average percent of total USDA commodities that was available to SFAs during the first, second, and third quarters of the school year. On average, SFAs received 22% of all commodities in the first quarter (July 1 - September 30), 30% in the second quarter (October 1 - December 31), 33% in the third quarter (January 1 - March 31), and the remaining 15% in the final quarter.

As is shown in Exhibit IV.10, almost three-quarters (72%) of all SFAs were satisfied with the timing of USDA commodity deliveries. However, large SFAs were less likely to be satisfied (52%) than small SFAs (85%). The 28% of SFAs that were dissatisfied with the timing of commodity deliveries were asked to recommend specific changes that could be made. The most common recommendation, made by 59% of these SFAs (see Exhibit IV.11), was to make more deliveries earlier in the school year, including July and August. Other recommendations were to deliver products more evenly throughout the year (14%) and to provide better information on what is coming and when it will arrive (8%).

Exhibit IV.9

Percent of Total Annual USDA Commodities Available by Quarter
(SY 1990-91)

	Mean Percent of Total USDA Commodities Available During			
	First Quarter (Jul 1 - Sep 30)	Second Quarter (Oct 1 - Dec 31)	Third Quarter (Jan 1 - Mar 31)	Fourth Quarter (Apr 1 - Jun 31)
TOTAL SAMPLE	22%	30%	33%	15%
Type of SFA				
Public	21	32*	34	13
Private	22	26	32	20
Participation in SBP				
NSLP and SBP	22	32	31	15
NSLP only	21	30	34	15
SFA Size				
Small (1-999)	24	29	32	15
Medium (1,000-4,999)	19	31	35	15
Large (5,000+)‡	20	32	32	16
SFA Poverty Level				
60% or more F&R	25	32	33	10
0-59% F&R	21	30	33	16
Total SFAs (Weighted)	13,055	12,871	12,816	12,816

*Group difference 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 Three SFA Manager Survey.

Exhibit IV.10

Percent of SFAs Satisfied with Timing of USDA Commodity Deliveries
(SY 1990-91)

	Percent of SFAs
TOTAL SAMPLE	72%
Type of SFA	
Public	71
Private	76
Participation in SBP	
NSLP and SBP	72
NSLP only	72
SFA Size	
Small (1-999)	84*
Medium (1,000-4,999)	65
Large (5,000+)‡	52
SFA Poverty Level	
60% or more F&R	80
0-59% F&R	71
Total SFAs (Weighted)	15,573

*Group difference 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 Three SFA Manager Survey.

Exhibit IV.11

Requested Changes in Timing of USDA Commodity Deliveries
(SY 1990-91)

Requested Change	Percent of SFAs
More deliveries earlier in the year (including July and August)	59%
Nonspecific improvements in timing	21
Deliver products more evenly throughout the year	14
Better information on what is coming and when it will arrive	8
Total SFAs (Weighted)	4,303

Ns and percentages are based on SFAs that are dissatisfied with and would like to see changes in the timing of commodity deliveries.

Data Source: Year Three SFA Manager Survey.

The 28% of SFAs that were dissatisfied with the timing of commodity deliveries were also asked what percentage of commodity deliveries they would like on a quarterly basis. Exhibit IV.12 shows that, on average, SFAs wanted 31% of commodities delivered in the first quarter of the school year, 28% in the second quarter, 26% in the third quarter, and 15% in the fourth quarter. This is somewhat more front-loaded than the current delivery schedule shown in Exhibit IV.9. Large SFAs were more interested in front-loading than were small SFAs.

SFA Managers were also asked whether they receive notification about expected commodity donations in time to adjust purchasing patterns for commercial food purchases. Exhibit IV.13 shows that 87% of all SFAs replied that they did receive timely notification, with no significant differences across subgroups of SFAs. A followup question asked SFA Managers how often they were able to negotiate approximate delivery dates for commodity shipments. About one-third (34%) of SFAs could negotiate delivery dates all of the time, 17% most of the time, 5% some of the time, and 43% none of the time. Low poverty SFAs and SFAs without the SBP were more often able to negotiate delivery dates than other SFAs.

IMPACT OF CHANGES IN BONUS COMMODITY DONATIONS

Beginning in 1981, USDA significantly increased donations of dairy products and other commodities acquired under agricultural price support programs to schools and other domestic and foreign food programs. The donations were part of USDA's effort to reduce stores of Government-owned dairy products. The bonus food donations were in addition to commodity entitlements mandated by authorizing legislation.

At its peak in FY 1987, USDA donations of bonus commodities to school programs reached $440 million (11 cents per NSLP meal), the majority being cheese (over $210 million) and red meat (over $180 million).1/ In an effort to bring the supply of dairy products more in line with demand, Congress instituted a number of reforms in the Food Security Act of 1985 (P.L. 99-198) that reduced incentives for the over-production of milk. As a result of these changes, dairy acquisitions decreased dramatically, to the point that USDA suspended distributions of bonus cheese to schools in 1988. Bonus commodity donations were about $83 million dollars in SY 1990-91.

1/Red meat typically does not represent a large portion of bonus commodities. The 1987 figures are anomalous in that they include the one-time whole-herd dairy buy-out.

Exhibit IV.12

Percent of Total Annual USDA Commodities Desired by Quarter (SY 1990-91)

	Mean Percent of Total USDA Commodities Desired During			
	First Quarter (Jul 1 - Sep 30)	Second Quarter (Oct 1 - Dec 31)	Third Quarter (Jan 1 - Mar 31)	Fourth Quarter (Apr 1 - Jun 30)
TOTAL SAMPLE	31%	28%	26%	15%
Type of SFA				
Public	32	28	26	14
Private	27	26	26	21
Participation in SBP				
NSLP and SBP	34	29	24	13
NSLP only	30	27	27	16
SFA Size				
Small (1-999)	27*	26	28	18*
Medium (1,000-4,999)	31	28	25	16*
Large (5,000+)‡	36	28	26	9
SFA Poverty Level				
60% or more F&R	31	29	27	13
0-59% F&R	31	28	26	15
Total SFAs (Weighted)	4,185			

Ns and percentages are based on SFAs that are dissatisfied with current timing of commodity deliveries.

*Group difference 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 Three SFA Manager Survey.

Exhibit IV.13

Questions About Notification and Delivery Dates for USDA Commodities (SY 1990-91)

	Percent of SFAs				
	That Receive Notification About Expected Donations in Time to Adjust Purchases	That Are Able to Negotiate Delivery Dates			
		All of the Time	Most of the Time	Some of the Time	None of the Time
TOTAL SAMPLE	87%	34%	17%	5%	43%
Type of SFA					
Public	86	33	20	6	40
Private	90	37	6	2	55
Participation in SBP					
NSLP and SBP	85	32*	13	5	50
NSLP only	88	38	26	6	30
SFA Size					
Small (1-999)	91	35	15	5	45
Medium (1,000-4,999)	84	34	19	5	42
Large (5,000+)‡	79	30	19	8	43
SFA Poverty Level					
60% or more F&R	90	32*	16	6	46
0-59% F&R	86	47	28	3	22
Total SFAs (Weighted)	15,497	15,302			

*Group difference 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 Three SFA Manager Survey.

SFA Managers were asked questions about the perceived impact of recent changes in levels of bonus commodity donations. Exhibit IV.14 shows that almost all (88%) SFAs believe that the reduction in bonus commodity donations has affected their food service operations. Large SFAs were even more likely to be affected than small SFAs (97% vs. 83%). When asked to list specific effects, 57% of SFA Managers noted that they changed their menus, 42% had increased food costs, 33% used more convenience items, 24% increased lunch prices, 5% increased breakfast prices, and 4% had decreased participation (see Exhibit IV.15). The exhibit shows how the perceived effect of reducing bonus commodities varies by SFA size. Large SFAs are somewhat more likely than other SFAs to report raising lunch prices, and large and medium SFAs are more likely than small SFAs to report a change in menus.

The 24% of SFA Managers who said that they had to increase lunch prices were asked to estimate the percentage of the increase that was attributable to reductions in bonus commodities. On average, SFA Managers estimated that about half (49%) of price increases was due to reductions in bonus commodities (see Exhibit IV.16). The same 24% of SFA Managers who raised prices were also asked whether they had increased the amount of commercial food purchases; 95% said that they had done so (see Exhibit IV.17). In particular, Exhibit IV.18 shows that 92% of SFAs purchased commercially processed cheese, 59% purchased non-fat dry milk, 55% purchased mozzarella cheese, and 9% purchased honey.

As was reported in Chapter 3, the price of a paid NSLP meal increased from an average of $1.00 in SY 1989-90 to an average of $1.08 in SY 1990-91. The data presented in this chapter suggest that part of that increase may be due to reductions in the level of USDA bonus commodity donations. Exhibit IV.19 presents data on the percentage of SFAs that increased prices and the magnitude of the price increases for two groups of SFAs: (1) the 24 percent of all SFAs that reported that reduced bonus commodity donations led them to increase lunch prices, and (2) the remaining 76 percent of SFAs that did not list increased lunch price as a result of decreased bonus commodity donations. Of the SFAs that reported a price increase due to reduced bonus commodity donations, 79 percent increased elementary school prices by an average of 12 cents, and 92 percent increased middle/secondary school prices by an average of 13 cents. Of the SFAs that reported no price increase due to decreased bonus commodity donations, 50 percent raised elementary school prices by an average of 13 cents, and 51 percent raised middle/secondary school prices by an average of 18 cents.

This analysis shows that most of the SFAs (79 percent in elementary schools and 92 percent in middle/secondary schools) that reported a price increase due to reduced bonus commodity donations did, in fact, raise prices. Of course, some SFAs that reportedly raised prices due to the reductions in bonus

Exhibit IV.14

Percent of SFAs That Indicate That Reduction in Bonus Commodities Has Affected Food Service (SY 1990-91)

	Percent of SFAs
TOTAL SAMPLE	88%
Type of SFA	
Public	89
Private	85
Participation in SBP	
NSLP and SBP	85
NSLP only	91
SFA Size	
Small (1-999)	83*
Medium (1,000-4,999)	92
Large (5,000+)‡	97
SFA Poverty Level	
60% or more F&R	70
0-59% F&R	91
Total SFAs (Weighted)	15,935

*Group difference 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 Three SFA Manager Survey.

Exhibit IV.15

Perceived Effects of Decreased Availability of Bonus Commodities
(SY 1990-91)

Perceived Effect	Percent of SFAs			All SFAs
	Small (1-999)	Medium (1,000-4,999)	Large (5,000+)	
Change in menus	51%	62%	61%	57%
Increased food cost	41	45	41	42
Use more convenience items	35	31	36	33
Increased lunch price	22	24	28	24
Increased breakfast price	3	6	7	5
Decreased participation	2	6	6	4
Other	4	6	5	5
Total SFAs (Weighted)	14,099			

Ns and percentages are based on SFAs that believed the reduction in bonus commodities had an effect on their food service program.

Data Source: Year Three SFA Manager Survey.

Exhibit IV.16

Percentage Increase in Lunch Price Due to Decreased Bonus Commodities (SY 1990-91)

	Percent of SFAs
TOTAL SAMPLE	49%
Type of SFA	
Public	48
Private	49
Participation in SBP	
NSLP and SBP	48
NSLP only	49
SFA Size	
Small (1-999)	51
Medium (1,000-4,999)	45
Large (5,000+)‡	49
SFA Poverty Level	
60% or more F&R	51
0-59% F&R	48
Total SFAs (Weighted)	3,260

Ns and percentages are based on SFAs that reported increased lunch prices due to decreased bonus commodities.

*Group difference 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 Three SFA Manager Survey.

Exhibit IV.17

Percentage of SFAs That Have Increased Commercial Purchases
Due to Decreased Bonus Donations
(SY 1990-91)

	Percent of SFAs
TOTAL SAMPLE	95%
Type of SFA	
Public	96
Private	93
Participation in SBP	
NSLP and SBP	99
NSLP only	93
SFA Size	
Small (1-999)	91
Medium (1,000-4,999)	99
Large (5,000+)‡	99
SFA Poverty Level	
60% or more F&R	90
0-59% F&R	96
Total SFAs (Weighted)	14,099

*Group difference 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 Three SFA Manager Survey.

Exhibit IV.18

Food Items Being Purchased Commercially Due to Decrease in USDA Donations (SY 1990-91)

Food Item	Percent of SFAs
Processed cheese	92%
Non-fat dry milk	59
Mozzarella cheese	55
Honey	9
Total SFAs (Weighted)	14,057

Ns and percentages are based on SFAs that believed the reduction in bonus commodities had an effect on their food service program.

Data Source: Year Three SFA Manager Survey.

Exhibit IV.19

NSLP Price Increase Data for SFAs That Did and Did Not Report a Price Increase Due to Reduction in Bonus Commodities

	24% of SFAs That Reported Increasing Prices From SY 1989-90 to SY 1990-91 Due to Reduction in Bonus Commodities		76% of SFAs That Did Not Report a Price Increase From SY 1989-90 to SY 1990-91 Due to Reduction in Bonus Commodities	
	Elementary	Secondary	Elementary	Secondary
SY 1989-90 to SY 1990-91				
Percent of SFAs That Increased Prices[1]	79%	92%	50%	51%
Mean Increase[2]	$.12	$.13	$.13	$.18
Median Increase[2]	$.10	$.10	$.10	$.15
Modal Increase[2]	$.10	$.10	$.10	$.09
SY 1989-89 to SY 1989-90				
Percent of SFAs That Increased Prices[1]	56%	59%	38%	53%
Mean Increase[2]	$.09	$.10	$.11	$.12
Median Increase[2]	$.10	$.10	$.10	$.10
Modal Increase[2]	$.05	$.10	$.10	$.05
Total SFAs (weighted)	1,594	1,143	4,333	3,057

[1]Based on SFAs that reported price data in both years, and that responded to question on perceived impact of changes in bonus commodities.

[2]Based only on SFAs that reported a price increase.

Data Source: Year One, Year Two and Year Three SFA Manager Surveys.

commodities did not do so (21 percent in elementary schools and 8 percent in middle/secondary schools).

One possibility is that many SFAs wanted to raise prices, were planning on raising prices, and that the reductions in bonus donations afforded a plausible reason for doing so. Exhibit IV.19 shows that SFAs which said that reduced bonus commodities caused them to raise prices from SY 1989-90 to SY 1990-91 were somewhat more likely than other SFAs to raise prices in the previous school year, when there was no large change in bonus donations. Over half of the SFAs (56 percent in elementary schools and 59 percent in middle/secondary schools) that reported raising prices from SY 1989-90 to SY 1990-91 due to reduced bonus donations also had raised prices in the previous school year, by about $.10. SFAs that did not report a price increase due to the reduction in bonus donations were less likely to have raised prices in the previous school year (38 percent in elementary schools and 53 percent in middle/secondary schools).

Based on this evidence, it is reasonable to assume that, for many SFAs, part of the observed price increase in school lunches from SY 1989-90 to SY 1990-91 was due to reductions in bonus donations. However, the data from this study do not allow us to estimate the amount of the increase that is due to the reduction in bonus.

SECTION V
TECHNICAL ASSISTANCE

This section presents findings on technical assistance that SFAs might receive about nutritional analysis as well as assistance that might be provided by the Food Service Management Institute.

BACKGROUND

FNS provides technical materials to SFAs as a means of ensuring that programs operate effectively and 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.

Year One of the Child Nutrition Program Operations Study included a detailed survey of the training and technical assistance currently being provided to SFAs as well as the areas in which SFAs perceive technical assistance needs. The Year Two Survey included a limited number of items intended to obtain feedback from SFA Managers on recent commodity-related technical assistance materials.

KEY RESEARCH ISSUES

The specific Year Three research questions related to technical assistance include:

- What do SFAs currently do to assess the nutrient content of school meals?
- Are SFAs aware of the Food Service Management Institute? What types of assistance would SFAs be interested in receiving?

DATA AND VARIABLES

Data were collected from SFA Managers through the Year Three SFA Manager Survey on two general themes of interest. The first focused on the extent to which SFAs make use of nutrient analysis as part of their day-to-day menu planning and food purchasing activities. The second focused on SFA manager awareness of the newly created Food Service Management Institute. The results of the survey were weighted and tabulated as described in Chapter I. T-tests were performed to examine differences among various types of SFAs.

NUTRIENT ANALYSES

Background

During the early 1980's, 18 school districts participated in the Nutrient Standard Menu Planning (NSMP) pilot project. Participating school districts planned school lunch menus on the basis of the nutrient content of food instead of the meal pattern requirements of the NSLP using specially designed software. Three major benefits were thought possible with NSMP: school lunch nutrition would more closely approach the program goal of providing one-third of the minimum RDA of important nutrients; food crediting problems would be eliminated; and menu planning flexibility would be increased.

Results of this earlier demonstration suggested that in terms of nutrition, NSMP lunches seemed to provide improved nutrition by focusing the attention and effort of SFA directors on problem nutrients like iron. However, NSMP requires standardized recipes, strict adherence to the published menu and careful coding of all district recipes into the computer. Furthermore, SFA directors must control menu development and day-to-day kitchen operations. Recommendations coming out of the demonstration project included the development of regulatory options to the meal pattern requirement, continuation of a formal demonstration, or developing NSMP as a technical assistance package. Such a technical assistance package would supplement local meal planning procedures by providing estimates of nutrition in planned meals that could be used to improve meal quality.

Analysis of data from Year One of this study suggested that more than two-thirds of all SFAs have the nutritional content of their menus analyzed. However, very few SFAs (9 percent) used a computer-based nutrient analysis program to conduct the nutritional analysis. Almost two-thirds of the public SFAs indicated an interest in further information on computer programs for nutrient analysis. Given this interest, FNS wanted to understand the circumstances that prevent SFAs from utilizing such programs. Further, FNS was interested in determining if school districts would be receptive to an NSMP technical assistance package.

Findings

As shown in Exhibit V.1, 35 percent of all SFAs perform a nutritional analysis of their menus.1/ For those SFAs that conduct nutritional analyses, about nine out of every ten use SFA staff to conduct this evaluation and it is generally done by hand. Only 19 percent use a computer to perform their nutritional analysis. Among subgroups of SFAs, public SFAs were less likely to use SFA staff for this function and more likely to have it done by their respective State agency. Public SFAs and large SFAs were also more likely to perform their nutritional analysis using a computer.

The most common reasons for not doing nutritional analysis (Exhibit V.2) are related to resource constraints (59 percent of SFAs that do not do a nutritional analysis), including the lack of a computer and/or necessary software (19 percent of SFAs that do not do a nutritional analysis). Other reasons include the opinion that such analyses are unimportant (16 percent), the perception that following NSLP meal guidelines is sufficient (14 percent), and a lack of required expertise (10 percent). Among different types of SFAs, public SFAs and large SFAs are most likely to cite a lack of a computer or software as the reason for not analyzing their menus.

For those SFAs that perform nutritional analyses by hand, it is also resource constraints that typically prevent them from using a computer (Exhibit V.3). Three-quarters report that they have no access to a computer, 18 percent cite budgetary constraints, and 9 percent identify a lack of software as the reason for doing the analysis by hand. Among different types of SFAs, small SFAs are significantly more likely to identify a lack of a computer as the reason for doing their analysis by hand. SFAs that participate in the SBP are more likely than others to say that they face a software constraint.

1/The first year report from this study found that 69 percent of SFAs conducted a nutrient analysis of their menus during SY 1988-89. The current report found that 35 percent of SFAs conducted a nutrient analysis of their menus two years later, during SY 1990-91. This does not necessarily reflect a drop in the percentage of SFAs conducting a nutrient analysis. Rather, it is likely that data from SY 1990-91 are more accurate than data from SY 1988-89. The SY 1988-89 data were based on reports from SFA Managers, and their answers to questions about nutrient analyses were accepted as is, without being questioned. For SY 1990-91, additional analysis of followup questions revealed that many SFA Managers claimed they were conducting nutrient analyses when, in fact, they were simply observing the meal pattern. For such SFAs, the answer to the question about nutrient analysis was recoded from "yes" to "no", reducing the percentage of SFAs that claimed they conducted a nutrient analysis of menus.

Exhibit V.1

SFAs Conducting Nutritional Analysis of Their Menus (SY 1990-91)

	Percent Conducting Nutritional Analysis	Who Does It+?			How Is It Done+?		
		SFA Staff	State Agency	Outside Consultant	Computer	By Hand	Other
TOTAL SAMPLE	35%	89%	5%	6%	19%	80%	1%
Type of SFA							
Public	36	86*	6	7	24*	75	1
Private	32	99	0	1	1	99	0
Participation in SBP							
NSLP and SBP	33	87	5	7	27	73	0
NSLP only	36	90	4	5	16	83	1
SFA Size							
Small (1-999)	37	93	4	3	7*	93	0
Medium (1,000-4,999)	36	83	6	10	25*	73	2
Large (5,000+)‡	27	89	7	4	56	44	0
SFA Poverty Level							
60% or more F&R	35	74	9	16	22	78	0
0-59% F&R	34	91	4	4	19	80	1
Total SFAs (weighted)	16,279	5707			5707		

*Group difference statistically significant at the .01 level.

+Reference group used in comparison: SFA staff vs. all other; computer vs. all other.

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

Data Source: Year Three SFA Manager Survey.

Exhibit V.2

Reasons For Not Doing Nutritional Analysis[1] (SY 1990-91)

	Insufficient Resources	No Computer or Software	Nutrient Content Unimportant	Don't Have to: Follow NSLP Guidelines	Lack Expertise	Other
TOTAL SAMPLE	59%	19%	16%	14%	10%	6%
Type of SFA						
Public	60	20*	16	15	10	6
Private	58	16	19	13	11	2
Participation in SBP						
NSLP and SBP	61	26	15	14	9	9
NSLP only	59	15	17	14	11	4
SFA Size						
Small (1-999)	56	10*	17	18	15*	7
Medium (1,000-4,999)	65	20*	16	11	8	3
Large (5,000+)‡	57	45	14	10	3	6
SFA Poverty Level						
60% or more F&R	48	18	7	21	19	19
0-59% F&R	61	19	18	13	9	4
Total SFAs (weighted)	10,116					

Ns and percentages based on SFAs that do not do a nutritional analysis.

[1]Multiple responses permitted.

*Group difference statistically significant at the .01 level.

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

Data Source: Year Three SFA Manager Survey.

Exhibit V.3

SFAs Performing Nutritional Analysis:
Reasons For Not Using a Computer To Do Nutritional Analysis[1]
(SY 1990-91)

	No Access to a Computer	No Budget for Computers	No Software	Don't Need a Computer	Can't Use a Computer	Other
TOTAL SAMPLE	75%	18%	9%	5%	4%	1%
Type of SFA						
Public	70	18	11	5	5	1
Private	93	18	4	6	0	0
Participation in SBP						
NSLP and SBP	67	17	21*	5	6	1
NSLP only	79	19	5	5	3	0
SFA Size						
Small (1-999)	82*	22	6	3	1	0
Medium (1,000-4,999)	71	14	13	5	9	1
Large (5,000+)‡	41	3	25	32	0	2
SFA Poverty Level[1]						
60% or more F&R	79	10	17	2	6	1
0-59% F&R	75	19	8	6	3	0
Total SFAs (weighted)	4,506					

Ns and percentages based on SFAs that do a nutritional analysis.

[1]Multiple responses permitted.

*Group difference statistically significant at the .01 level.

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

Data Source: Year Three SFA Manager Survey.

SFAs performing nutritional analyses were also asked whether they used the results of their assessment to plan school menus. Most (80 percent) said that they used the results of their nutritional analysis for this purpose. No significant differences were found among different subgroups of SFAs (Exhibit V.4).

Exhibit V.5 summarizes the specific nutrients evaluated by SFAs which employ nutritional analysis. Fat was the nutrient mentioned most often -- about three-quarters of these SFAs evaluated levels of fat in planned menus. Few SFAs identified a specific numeric goal used in menu planning (e.g., percent of calories from fat). Most indicated that they were attempting to "lower" levels of fat.

Sodium, sugar and vitamin C were the next most frequently cited nutrients (47 percent, 38 percent and 35 percent, respectively.) Again, respondents were generally unable to identify a specific numeric goal for these nutrients. Rather, they reported efforts to "lower" levels of sodium and sugar and to include foods high in vitamin C several times per week.

Approximately one-quarter of the SFAs that used nutrient analysis examined levels of calcium, iron, protein and vitamin A. Calories were evaluated by only six percent of SFAs.

Managers were asked to identify the specific reference(s) used in establishing nutrition-related goals for school meals. In keeping with the findings noted above, the references most often cited are those which include recommendations regarding intake of fat, sodium, sugar and related nutrients. As shown in Exhibit V.6, 35 percent of SFA managers that use nutritional analysis specifically cited the USDA/DHHS "Dietary Guidelines for Americans" as a reference used in establishing nutritional goals. Twenty-five percent of managers gave the less specific response of "USDA Guidelines." These responses most likely also refer to the Dietary Guidelines, since they have been promoted by USDA for some time.[1] For example, USDA's published menu planning guide discusses the Dietary Guidelines, encourages menu planners to consider them in developing menus, and provides some simple strategies for controlling levels of fat, sodium and sugar in school meals.

Twenty-two percent of SFA managers use state-developed guidelines as a reference for nutritional goals. Recommendations from a variety of other agencies including the American Heart Association, The National Research Council, and the Surgeon General, are used by three to 12 percent of SFA managers.

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[1]Respondents who cited "USDA Guidelines" and then described the NSLP meal pattern were excluded from this analysis.

Exhibit V.4

SFAs Performing Nutritional Analysis:
Use of Nutrient Analysis in Menu Planning
(SY 1990-91)

	Percent of SFAs Using Analysis in Menu Planning
TOTAL SAMPLE	80%
Type of SFA	
Public	77
Private	92
Participation in SBP	
NSLP and SBP	72
NSLP only	83
SFA Size	
Small (1-999)	85
Medium (1,000-4,999)	72
Large (5,000+)‡	81
SFA Poverty Level	
60% or more F&R	79
0-59% F&R	80
Total SFAs (weighted)	4535

Ns and percentages based on SFAs that do a nutritional analysis.

*Group difference is statistically significant at the .01 level.

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

Data Source: Year Three SFA Manager Survey.

Exhibit V.5

Nutrients Evaluated by SFAs Which Conduct Nutrient Analysis

Nutrient	Percent of SFAs
Calcium	26%
Calories	6
Carbohydrate	11
Cholesterol	14
Fat - Total	74%
Saturated	7
Unsaturated	3
Fiber	20
Iron	21
Niacin	7
Protein	28
Riboflavin	7
Sodium	47
Sugar	38
Thiamin	7
Vitamin A	28
Vitamin B_6	6
Vitamin C	32
Total SFAs (Weighted)	3,376

Ns and percentages based on SFAs that do a nutritional analysis.

Data Source: Year Three SFA Manager Survey.

Exhibit V.6

SFAs Using Nutritional Analysis in Menu Planning:
References Used to Set Nutritional Goals[1]
(SY 1990-91)

Reference	Percent of SFAs
USDA/DHHS Dietary Guidelines	35%
"USDA Guidelines"	25
State Guidelines	22
Personal Knowledge	13
American Heart Association Guidelines	12
Surgeon General's Report on Nutrition and Health	10
National Research Council Guidelines	9
National Cholesterol Education Program Guidelines	8
National Cancer Institute Guidelines	3
Other	14
Total SFAs (weighted)	4,205

Ns and percentages based on SFAs that do a nutritional analysis.

[1]Multiple responses permitted.

Data Source: Year Three SFA Manager Survey

SFAs that conduct a nutritional analysis were also asked about their preferences regarding information used to plan school menus (Exhibit V.7). Three-fourths of SFAs that conducted a nutritional analysis reported a preference for the meal pattern guidelines over the use of nutritional analysis to plan their menus suggesting that many SFAs that have tried nutritional analysis may not have found it as useful as hoped for menu planning or found that the process was too labor intensive. This expressed preference does not vary significantly among subgroups of SFAs.

Finally, SFAs were asked whether they contacted manufacturers to obtain nutritional information on commercially-purchased products (Exhibit V.8). Fifty-eight percent of all SFAs report having contacted manufacturers for this purpose, and that information is generally available for most products for which such information is requested. Public SFAs and large SFAs were most likely to request such information. However, SFAs that serve 60 percent or more free or reduced-price meals were less likely to report obtaining nutrient information for all products. The most commonly available data are total fat (reported by 82 percent of the SFAs requesting such information), protein (64 percent), calories (61 percent), and sodium (53 percent).

Among different types of SFAs, public SFAs are significantly more likely to obtain information on fats and calcium, and SFAs that serve 60 percent or more free or reduced-price meals are less likely to obtain information on calories, iron, thiamin, niacin and riboflavin.

NATIONAL FOOD SERVICE MANAGEMENT INSTITUTE (NFSMI)

Background

During the late 1980's, the American School Food Service Association and other food service professionals proposed the establishment of a national institute to provide training, technical assistance, research and management support for Child Nutrition food service programs. With the passage of P.L. 101-147, Congress authorized the U.S. Department of Agriculture to establish the Institute at the University of Mississippi for fiscal years 1990 through 1994. A 5-year cooperative agreement between the Food and Nutrition Service and the University of Mississippi was signed in March of 1990. The Research Division of the Institute is subcontracted to the University of Southern Mississippi. This relationship between the two universities is expected to continue through the duration of the authorizing legislation. The Institute conducts training activities designed to improve the operation and quality of Child Nutrition Programs including:

- Establishing a national network of trained professionals to present training programs for food service personnel.

Exhibit V.7

SFAs Performing Nutritional Analysis:
Menu Planning Preferences
(SY 1990-91)

	Prefer Nutrient Analysis	Prefer Meal Pattern
TOTAL SAMPLE	25%	75%
Type of SFA		
Public	26	74
Private	17	83
Participation in SBP		
NSLP and SBP	28	72
NSLP only	23	77
SFA Size		
Small (1-999)	24	76
Medium (1,000-4,999)	27	73
Large (5,000+)‡	24	76
SFA Poverty Level		
60% or more F&R	33	67
0-59% F&R	24	76
Total SFAs (weighted)	5121	

Ns and percentages based on SFAs that do a nutritional analysis.

*Group difference is statistically significant at the .01 level.

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

Data Source: Year Three SFA Manager Survey.

Exhibit V.8

Nutritional Information Obtained From Manufacturers

	Total Sample	Type of SFA		Participation in SBP		SFA Size			SFA Poverty Level	
		Public	Private	NSLP and SBP	NSLP only	Small	Medium	Large	High	Low
Have contacted manufacturers	58%	65%*	30%	65%	54%	38%*	75%	83%	45%	60%
How often are data available?+										
a) always for all products	25	23	39	28	23	25	25	25	13*	26
b) for most products	66	67	52	68	64	65	67	63	84	64
c) for a few products	8	8	9	3	12	8	7	11	2	9
d) rarely available	1	1	0	1	1	1	1	1	1	1
What information is typically available?[1]										
Total Fat	82	82	79	80	83	80	84	79	73	83
Protein	64	65	52	66	62	66	63	63	44	66
Calories	61	60	66	53	66	54	62	67	29*	64
Sodium	53	53	55	50	55	49	55	53	51	53
Carbohydrates	44	45	43	41	46	37	46	52	27	46
Vitamin A	39	40	35	39	39	41	38	38	41	39
Vitamin C	39	40	35	38	40	38	40	39	41	39
Cholesterol	30	27	58	22	35	44	22	27	21	31
Iron	26	26	22	26	26	24	30	19	11*	27
Thiamin	21	19	31	18	22	27	18	16	8*	22
Niacin	22	21	29	18	24	26	22	15	9*	23
Riboflavin	19	19	20	18	20	24	17	16	7*	21
Unsaturated Fat	13	15*	0	16	11	13	11	18	9	14
Saturated Fat	11	13*	0	11	11	13	10	13	9	12
Sugar	5	4	16	6	4	6	4	5	15	4
Calcium	3	3*	0	4	2	1	4	5	1	3
RDA Information	3	2	11	2	3	4	2	3	0	3
Other	2	3	1	4	2	2	2	4	1	2
Total SFAs (weighted)	9,411	8,398	1,013	3,591	5,820	3,000	4,458	1,953	914	8,497

[1]Multiple responses permitted.
*Group difference statistically significant at the .01 level.
+Reference group used in comparison: always vs. for most.
Data Source: Year Three SFA Manager Survey.

- Establishing a national center for applied research to assist schools in providing high quality, nutritious cost-effective meal service to children.

- Providing training and technical assistance to food service managers and personnel.

- Acting as a clearinghouse for food service operations information retrieval and dissemination.

The questions posed in the Year Three survey are intended to assist the Institute in determining the training needs of school food service practitioners and related personnel as well as determining the type of training materials and resources that are needed. In addition, these data should provide some insight into the numbers of potential school food service personnel interested in attending workshops available through the Institute.

Findings

As shown in Exhibit V.9, 30 percent of all SFAs are aware of the recently created National Food Service Management Institute. Not surprisingly, large SFAs were most likely to be aware of the Institute.

SFAs were also asked what functions they thought the Institute should serve (those unaware of the Institute were provided with a description of its purpose). About two-thirds thought training was the most appropriate role for the Institute, while about one-third suggested technology transfer as an important function. Other cited functions included research (15 percent), serving as a source of nutritional information (6 percent) or recipes (5 percent), and providing a vehicle for increasing the health focus of school meal programs (4 percent). Public SFAs and large SFAs were most likely to cite research as an important Institute function.

Finally, SFAs were queried about their needs for training and/or information on specific topics related to the management of school food service programs. The results shown in Exhibit V.10 are that most SFA managers feel a need for training on most topics, with learning to make better use of USDA donated commodities and implementing the U.S. Dietary Guidelines in school feeding programs heading the list. About eight out of ten expressed a need for training in these two areas. For each topic, SFA Managers were asked whether they would prefer a workshop or written materials. In general, workshops were preferred.

For those SFAs expressing a desire for a workshop on at least one of the topics listed in Exhibit V.10, managers were asked where they would be able to attend such a training session (Exhibit V.11). In light of current budgetary constraints, it is not surprising that the results are related to proximity to their local area. All SFAs responded positively to a local area workshop, 89 percent to a State workshop, 59 percent to a regional workshop, and 16 percent to a single national workshop. Among different types of SFAs, public SFAs, large SFAs, and SFAs that serve 60 percent or more free or reduced-price lunches were most likely to express an ability to attend a national workshop.

Exhibit V.9

Knowledge of the National Food Service Management Institute
(SY 1990-91)

	Percent Aware of Institute	What Functions Should the Institute Serve?[1]			
		Training	Technology Transfer	Research	Nutritional Information
TOTAL SAMPLE	30%	68	34	15	6
Type of SFA					
Public	32	70	35	18*	5
Private	26	62	28	1	8
Participation in SBP					
NSLP and SBP	35	69	34	16	8
NSLP only	28	68	34	14	5
SFA Size					
Small (1-999)	20*	65	36	9*	7
Medium (1,000-4,999)	32	69	31	15	5
Large (5,000+)‡	61	76	34	28	6
SFA Poverty Level					
60% or more F&R	18	66	37	11	9
0-59% F&R	32	69	34	15	5
Total SFAs (weighted)	16,280				

[1]Multiple responses permitted.

*Group difference is statistically significant at the .01 level.

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

Data Source: Year Three SFA Manager Survey.

Exhibit V.10

Need for Training Program, Written Materials, or Workshops by Topic
(SY 1990-91)

Topic	Need Training Program?	If yes, do you...	
		Want Written Materials?	Want a Workshop?
Financial Management	62%	33%	67%
Regulations and Guidelines	68	43	57
Quality Control/Assurance	68	41	59
Production Systems/Techniques	67	32	68
Implementing U.S. Dietary Guidelines	79	46	54
Productivity	69	38	62
Computer Systems in Food Service	59	16	84
Software Needs Assessment and Evaluation	55	28	72
Purchasing and Procurement	55	44	56
Marketing/Merchandising	62	40	60
Layout and Design	42	58	42
Equipment Selection/Maintenance	62	57	43
Feeding Handicapped Children	47	54	46
Citizen and Public Relations	50	48	52
Personnel Management	60	35	65
Legalities in Employee Relations	53	45	55
Small Business Principles and Practice	40	44	56
Decisionmaking and Management Techniques	63	30	70
Use of Commodities	81	38	62
Total SFAs (weighted)	16,021		

Data Source: Year Three SFA Manager Survey

Exhibit V.11

SFAs Expressing a Desire for a Workshop on at Least One Topic:
Ability to Attend by Location[1]
(SY 1990-91)

	Preferred Location of Workshop			
	One-Time National Workshop (Single Location)	**FNS Regional Workshops**	**State Workshops**	**Local Area Workshops**
TOTAL SAMPLE	16	59	89	100
Type of SFA				
Public	19*	64	91	100
Private	5	37	80	100
Participation in SBP				
NSLP and SBP	22	65	90	100
NSLP only	14	55	88	100
SFA Size				
Small (1-999)	11*	47*	83	100
Medium (1,000-4,999)	18	68	92	100
Large (5,000+)‡	29	69	96	99
SFA Poverty Level				
60% or more F&R	30*	68	83	99
0-59% F&R	15	57	89	100
Total SFAs (weighted)	12,962			

Ns and percentages based on SFAs that do a nutritional analysis.

[1]Multiple responses permitted.

*Group difference is statistically significant at the .01 level.

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

Data Source: Year Three SFA Manager Survey.

SECTION VI
COMMERCIAL FOOD SERVICE VENDORS

This section presents findings related to SFA use of commercial food service vendors to provide part of their school meal services.

BACKGROUND

FNS is aware that an increasing number of school districts are contracting with outside vendors (e.g. Pizza Hut, McDonald's, Wendy's) to provide some of their food service. In order to assess the impact of such contracts and the possible need for increased or additional regulations, FNS needs information about the prevalence of this practice, the particular vendors involved, and how these vendors are integrated into traditional SFA operations.

KEY RESEARCH ISSUES

The specific Year Three research questions included:

- Do SFAs use commercial food service vendors? If so, how?
- What is the extent of their use?

DATA AND VARIABLES

Data were collected from SFA Managers through the Year Three SFA Manager Survey on the extent to which SFAs have been approached by commercial companies that provide retailed, prepared, ready-to-eat foods; the vendors involved; and SFA use of such vendors. For those SFAs using commercial vendors in their school food service programs, additional questions were also asked about the selection process used and their current program responsibilities. Survey results were tabulated and t-tests performed when appropriate to compare results among subgroups of SFAs.

FOOD SERVICE VENDORS

Nearly one-third of all SFAs (29%, or about 4,700 SFAs) have been approached by a commercial company offering to provide retailed, prepared, or ready-to-eat foods (Exhibit VI.1). Not surprisingly, statistically significant differences were found among SFAs of different sizes. Large SFAs, with their greater market potential, were most likely to have been contacted by a commercial vendor--58% of large SFAs were approached by vendors.

Exhibit VI.1

SFAs Approached by Commercial Food Service Vendors
(SY 1990-91)

	Percent Contacted by Vendor
TOTAL SAMPLE	29%
Type of SFA	
Public	32
Private	20
Participation in SBP	
NSLP and SBP	33
NSLP only	27
SFA Size	
Small (1-999)	19*
Medium (1,000-4,999)	32*
Large (5,000+)‡	58
SFA Poverty Level	
60% or more F&R	25
0-59% F&R	30
Total SFAs (weighted)	16,276

*Group difference is statistically significant at the .01 level.

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

Data Source: Year Three SFA Manager Survey.

National retail chains have accounted for the majority of commercial vendor contracts with SFAs. Pizza Hut has been by far the most active firm in this marketing effort, having contacted 70% of those SFAs reporting at least one contact. Other major firms include Domino's Pizza (contacted 15%), and McDonalds (11%) (Exhibit VI.2).

Despite the relatively large number of SFAs reporting contacts by commercial food vendors, only 8% of those contacted (less than 400, or between 2% and 3% of all SFAs nationally) have actually entered into a contractual arrangement with one of these companies (Exhibit VI.3). Public SFAs and large SFAs are most likely to have an operational program. By far, delivering ready-to-eat meals or partially-prepared foods are the most common functions of commercial food service vendors (Exhibit VI.4).

A similar question was asked in Year One of this project, and it is important to understand the reasons for the differences in the responses. In Year One, SFAs were asked whether they used a Food Service Management Company to perform any food service functions during SY 1988-89. The FSMCs were identified as performing a very broad range of functions including financial and accounting services, preparation of menus, food purchasing, food preparation and food services, and many others. An estimated seven percent of all SFAs in the country used FSMCs for some or all of these functions. The current (Year Three) survey asked a similar, but more focused question for SY 1990-91. The question was whether SFAs used any commercial company to provide retailed, prepared, ready-to-eat foods to students. The fact that a smaller percentage of SFAs (between two and three percent) indicated that such vendors were operating food service programs in their school districts is not surprising given the more focused nature of the question.

Although SFAs are generally required to use competitive bidding procedures, only two-thirds report using this approach to select the commercial food vendor currently in use (Exhibit VI.5). Statistically significant differences were found among SFAs of different sizes with large SFAs most likely to use competitive bidding procedures.

Exhibit VI.2

Commercial Food Vendors Contacting SFAs[1] (SY 1990-91)

Firm	Total Sample	Type of SFA		Participation in SBP		SFA Size			SFA Poverty Level	
		Public	Private	NSLP and SBP	NSLP only	Small	Medium	Large‡	High	Low
Pizza Hut	70%	69%	74%	72%	68%	65%	67%	78%	45%	73%
Domino's Pizza	15	16	6	11	16	11	14	19	10	15
McDonald's	11	12	5	5	15	17	11	6	6	12
Burger King	1	0	5	0	2	2	0	1	1	1
Wendy's	1	1	0	0	1	0	1	1	0	1
Other	2	3	0	4	1	0	2	6	1	2
Any National Chain	84	85	80	82	85	82	81	90	57	87
Total SFAs (Weighted)	4,627	3,989	638	1,741	2,886	1,442	1,830	1,355	502	4,125

Ns and percentages based on SFAs that have been contacted by a vendor.
[1]Multiple responses permitted.
*Group difference is statistically significant at the .01 level.
‡Reference group used in group comparisons: Small SFAs vs. Large SFAs; Medium SFAs vs. Large SFAs.
Data Source: Year Three SFA Manager Survey.

Exhibit VI.3

SFAs with Operational Food Service Programs
(SY 1990-91)

	Percent of those Contacted
TOTAL SAMPLE	8%
Type of SFA	
Public	9*
Private	1
Participation in SBP	
NSLP and SBP	11
NSLP only	6
SFA Size	
Small (1-999)	2*
Medium (1,000-4,999)	4*
Large (5,000+)‡	19
SFA Poverty Level	
60% or more F&R	12
0-59% F&R	7
Total SFAs (weighted)	4,771

Ns and percentages based on SFAs that have been contacted by a vendor.

*Group difference is statistically significant at the .01 level.

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

Data Source: Year Three SFA Manager Survey.

Exhibit VI.4

Commercial Food Service Vendor Functions (SY 1990-91)

	Deliver Ready-to-Eat Meals	Deliver Partially Prepared Food	Sometimes Serve Food	Promote Products	Help Manage Food Service	Other	Total SFAs (weighted)
TOTAL SAMPLE	87%	10%	9%	16%	3%	4%	369
Type of SFA							
Public	87	10*	9	17*	3	4	364
Private	100	0	0	0	0	0	5
Participation in SBP							
NSLP and SBP	91	8	5	13	1	3	192
NSLP only	82	13	14	20	5	7	177
SFA Size							
Small (1-999)	61	35	4	39	4	4	28
Medium (1,000-4,999)	80	11	11	18	0	11	78
Large (5,000+)‡	92	7	9	14	4	2	263
SFA Poverty Level							
60% or more F&R	67	31	4	26	2	9	63
0-59% F&R	91	6	10	14	4	4	306

Ns and percentage based on SFAs that are using a food service vendor.
[1]Multiple responses permitted.
*Group difference is statistically significant at the .01 level.
‡Reference group used in group compariсons: Small SFAs vs. Large SFAs; Medium SFAs vs. Large SFAs.
Data Source: Year Three SFA Manager Survey.

Exhibit VI.5

Use of Competitive Bidding to Select Food Vendors
(SY 1990-91)

	Percent Using Competitive Bidding
TOTAL SAMPLE	63%
Type of SFA	
Public	63
Private	33
Participation in SBP	
NSLP and SBP	78
NSLP only	45
SFA Size	
Small (1-999)	23*
Medium (1,000-4,999)	37*
Large (5,000+)‡	74
SFA Poverty Level	
60% or more F&R	58
0-59% F&R	64
Total SFAs (weighted)	346

Ns and percentages based on SFAs that are using a food service vendor.

*Group difference is statistically significant at the .01 level.

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

Data Source: Year Three SFA Manager Survey.

SECTION VII
AFTER-SCHOOL CARE

This section discusses school district provision of after-school care and its relationship to school food service programs.

BACKGROUND

In November, 1989 the National School Lunch Act was amended to include provision of meal supplements to children in after-school care programs operated in eligible elementary and secondary schools (P.L. 101-147). The Child and Adult Care Food Program (CACFP) also provides subsidies for meals served in non-residential child care programs, which may be run by public or private schools. FNS has detailed information on the Child Care Food Program (which preceded the CACFP), but has little information on school-based after-school care programs and needs to obtain an estimate of the prevalence of after-school programs as well as an understanding of how these programs operate. Information collected in the Year Three survey provides such a database.

KEY RESEARCH ISSUES

The specific Year Three research questions included:

- To what extent do schools provide after-school care for students and who sponsors the programs?

- What type of meal service, if any, is provided? What is provided? How much is charged?

DATA AND VARIABLES

Data were collected from SFA Managers through the Year Three SFA Manager Survey on district provision of after-school child care. For those districts offering such a program to students, SFA managers were asked who sponsors the program, the extent to which services are provided, and the hours of operation. Managers were also asked about the type of food service, if any, provided to these children, and who pays for the meals. As in prior sections, survey responses were tabulated and t-tests performed among different types of SFAs providing after-school care programs.

Prior to the start of the Year Three data collection, it was anticipated that SFA Managers might have difficulty answering some or all of the questions in this section. In spite of this problem, the decision was made to proceed with the

survey on the basis that SFA Managers would be able to supply the best available data on the topic.

Based on the data, it does appear that SFA Managers were not able to supply valid answers to all questions. First, only 26% of the SFA Managers replied that some schools in the district offered after-school care programs. This may reflect reality, or it may simply be that SFA Managers are not informed about all after-school programs, especially those that do not involve food service. Even for after-school programs that do offer food service, managers noted that outside vendors handle the food service operations in 40% of the SFAs. For these SFAs, the SFA Manager is likely to have limited knowledge of after-school care programs. Readers of this section should keep these caveats in mind when considering the data presented here. The estimates of numbers of schools and children participating in after-school care programs should therefore be regarded as lower bounds on the true numbers.

AFTER-SCHOOL CARE

SFA Managers were first asked whether any of the schools in their district had an after-school care program. A total of 26%, representing about 4,000 SFAs, replied that some schools in the district did have a program (see Exhibit VII.1) while the remainder replied that no schools had an after-school care program (a very small number did not know whether any schools had an after-school care program). Large SFAs are significantly more likely than small or medium-sized SFAs to have an after-school care program. SFA Managers that answered "No" or "Don't Know" were not asked any additional questions as part of this survey.

The sponsoring organization for after-school care programs is most often the school district (58% of SFAs), followed by the YMCA/YWCA (20%), and a host of other agencies (e.g., community action agency, parent/teacher organization, church group, child care agency, park/recreation department) each in five percent or less of the SFAs (see Exhibit VII.2).

SFA Managers were then asked how many elementary and middle/secondary schools in their school district offered after-school care programs. Based on the responses, Exhibit VII.3 shows that 13,625 elementary and 247 middle/secondary schools offer after-school care programs to a total of 600,474 participating children. It is no surprise that almost all of the after-school care programs are in elementary schools. Most participating children are in the public SFAs (92%), in SFAs which also offer the SBP (71%), in large SFAs (74%), and in SFAs that served 59 percent or fewer free or reduced meals (80%). It should be recalled that this number is based on information supplied by SFA Managers, who may not have access to the most accurate

Exhibit VII.1

Existence of After-School Care in District
(SY 1990-91)

	Percent of SFAs
TOTAL SAMPLE	26%
Type of SFA	
Public	24
Private	33
Participation in SBP	
NSLP and SBP	31
NSLP only	23
SFA Size	
Small (1-999)	18*
Medium (1,000-4,999)	25*
Large (5,000+)‡	54
SFA Poverty Level	
60% or more F&R	13
0-59% F&R	28
Total SFAs (Weighted)	16,213

*Group difference 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 Three SFA Manager Survey.

Exhibit VII.2

Sponsoring Organization for After-School Care
(SY 1990-91)

Sponsoring Organization	Percent of SFAs
School District	58%
YMCA/YWCA	20
Local Community Action Agency	5
Parent/Teacher Organization	4
Church Group	2
Child Care Agency	2
Park/Recreation Department	2
Individual Schools	2
Other	5
Total SFAs (Weighted)	4,094

Ns and percentages are based on 26% of SFAs that have after-school care.

Data Source: Year Three SFA Manager Survey.

Exhibit VII.3

Number of Schools and Children in After-School Care Programs (SY 1990-91)

	Elementary Schools	Middle/ Secondary Schools	Total Schools		Total Children	
			N	%	N	%
TOTAL SAMPLE	13,625	247	13,872	100%	600,474	100%
Type of SFA	12,264	247	12,511	90*	550,623	92*
Public	1,361	0	1,361	10	49,851	8
Private						
Participation in SBP						
NSLP and SBP	8,491	203	8,694	63*	428,866	71*
NSLP only	5,134	44	5,178	37	171,608	29
SFA Size						
Small (1-999)	1,453	0	1,453	10*	59,728	10*
Medium (1,000-4,999)	2,965	166	3,131	23*	99,045	16*
Large (5,000+)‡	9,207	81	9,288	67	441,701	74
SFA Poverty Level						
60% or more F&R	1,935	42	1,977	14*	120,648	20*
0-59% F&R	11,690	205	11,895	86	479,826	80
Total SFAs (Weighted)	4,151				3,409	

*Group difference 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 Three SFA Manager Survey.

information about after-school programs; hence these estimates are likely to be lower bounds on the actual number of participants.

Exhibit VII.4 presents information about the hours of operation and duration of after-school care programs. Most programs begin between 2:30pm and 3:30pm, and last for an average of 3.0 hours. This makes sense, since most schools end the day between 2:30pm and 3:30pm, and the after-school care programs described here will provide care until about 6:00pm, when parents arrive after work. About 12% of the programs begin between 1:30pm and 2:30pm, and run for an average of 3.5 hours, and another 11% of the programs begin between 3:30pm and 4:30pm, and run for an average of 2.3 hours.

SFA Managers were asked about requirements imposed on after-school care providers, in addition to those contained in the CACFP regulations. Most SFA Managers (52%) did not know whether any additional requirements existed (Exhibit VII.5). Another 28% replied that there were no additional requirements. Only a few SFAs said that there were state guidelines (8%), licensing or certification requirements (6%) or any others. A follow-up question asked which agency mandated the requirements (Exhibit VII.6). In most cases, requirements were mandated by state authorities (73%), while local authorities were involved in 28% of the SFAs, and both state and local authorities for 1% of the SFAs.

Exhibit VII.7 shows the percentage of SFAs where snacks or supper is provided to participating children. In total, 85% of SFAs provide snacks or supper in all programs, 6% in some programs, and 9% in none of their programs. As is shown in Exhibit VII.8, almost all of the meals (97%) are snacks.

Several food items were provided as snacks by around half of the SFAs (see Exhibit VII.9) including juice (68%), crackers or pretzels (60%), cookies (53%), milk (46%), and fruits or vegetables (46%). Some of the other, less commonly provided snacks were cheese (22%), peanut butter (21%), nuts or raisins (14%), popcorn (11%), and chips (11%). A host of other snacks were provided by less than 10% of the SFAs.

SFA Managers were asked how the food service operations were handled in after-school care programs (Exhibit VII.10). The most common arrangement is to have an outside vendor handle the food service. This is the case in 40% of the SFAs. SFA employees handle the food service for after-school care programs in 27% of the SFAs, and no food preparation is necessary in another 20%. After-school programs use their own facilities for food service in 25% of the SFAs, and use SFA facilities in 13% of the SFAs. The responses to this question call into question the appropriateness of using the SFA Manager as respondent for questions about after-school care. If 40% of

Exhibit VII.4

Starting Time and Duration of After-School Care
(SY 1990-91)

Starting Time	Mean Duration	Percent of SFAs
11:30 am - 12:29 pm	5.9 hrs	3%
12:30 pm - 1:29 pm	5.1 hrs	1
1:30 pm - 2:29 pm	3.5 hrs	12
2:30 pm - 3:29 pm	2.9 hrs	72
3:30 pm - 4:29 pm	2.3 hrs	11
4:30 pm - 5:29 pm	0	0
5:30 pm - 6:29 pm	2.5 hrs	2
Total	3.0 hrs	100
Total SFAs (Weighted)		3,827

Data based on SFAs that have after-school care.

Data Source: Year Three SFA Manager Survey

Exhibit VII.5

Requirements Placed on After-School Care Providers
(SY 1990-91)

Requirement	Percent of SFAs
No requirements	28%
State Guidelines	8
License or Certification	6
Other	5
Regulated by Social Services or Family Services	2
Don't Know	52
Total SFAs (Weighted)	4,198

Ns and percentages are based on those SFAs that have after-school care.

Data Source: Year Three SFA Manager Survey.

Exhibit VII.6

Authorities Mandating Additional Requirements
(SY 1990-91)

	Percent of SFAs
State Authorities	73%
Local Authorities	28
Both State and Local	1
Total SFAs (Weighted)	688

Ns and percentages are based on SFAs that have after-school care and that impose requirements in addition to Federal guidelines.

Date Source: Year Three SFA Manager Survey.

Exhibit VII.7

How Many After-School Programs Provide Snacks or Supper to Children (SY 1990-91)

	Percent of SFAs		
	All	Some	None
Total Sample	85%	6%	9%
Type of SFA			
Public	87	3	10
Private	81	12	8
Participation SBP			
NSLP & SBP	82	7	11
NSLP only	91	3	7
SFA Size			
Small (1-999)	82	9	9
Medium (1000-4999)	89	2	9
Large (5000+) ‡	84	5	11
SFA Poverty Level			
60% or more F&R	76	8	17
0-59% F&R	86	5	9
Total SFAs (Weighted)	4,019		

Ns and percentages based on SFAs that have after-school care programs.

* Group Difference is statistically significant at the .01 level.

‡ Reference group used in comparisons with Large SFAs vs. small SFAs; Large SFAs vs. Median SFAs.

Data Source: Year Three SFA Manager Survey

Exhibit VII.8

Type of Food Service Provided in
After-School Care Programs
(SY 1990-91)

	Percent of SFAs			
	Snacks only	Supper only	Both	Other
Total Sample	97%	1%	0%	2%
Type of SFA				
Public	97	0	1	2
Private	98	2	0	0
Participation SBP				
NSLP & SBP	95	0	1	4
NSLP Only	99	1	0	0
SFA Size				
Small (1-999)	98	2	0	0
Median (1000-4999)	99	0	1	0
Large (5000+)‡	94	0	0	6
SFA Poverty Level				
60% or more F&R	89	9	2	0
0-59% F&R	98	0	0	2
Total SFAs (Weighted)	3,638			

Ns and percentages based on SFAs that have after-school care programs.

* Group difference is statistically significant at the .01 level.
‡ Reference group used in comparisons of Large SFAs vs. small SFAs; Large SFAs vs. Medium SFAs.

Data Source: Year Three SFA Manager Survey

Exhibit VII.9

Food Items Typically Provided as Afternoon Snacks
in After-School Care Programs
(SY 1990-91)

Food Item	Percent of SFAs
Juice	68%
Crackers, pretzels	60
Cookies	53
Milk	46
Fruits, vegetables	46
Cheese	22
Peanut butter	21
Nuts, raisins	14
Popcorn	11
Chips	11
Cake	7
Soda, jello	6
Ice cream	6
Bread, rolls	5
Sandwiches	5
Yogurt	4
Cereal	4
Muffins, biscuits	3
Total SFAs (Weighted)	3,560

Ns and percentages are based on SFAs that have after-school care programs which provide snacks.

Data Source: Year Three SFA Manager Survey.

Exhibit VII.10

Organization of Food Service in After-School Care Programs
(SY 1990-91)

	Percent of SFAs
Outside vendors handle food service	40%
SFA employees handle food service	27
No food preparation needed	20
Programs use own facilities	25
Programs use SFA facilities	13
Other	5
Total SFAs (Weighted)	3,581

Ns and percentages are based on those SFAs that have after-school care programs and which provide snacks.

Data Source: Year Three SFA Manager Survey.

the SFAs have an outside vendor handle food service for after-school care, the SFA Manager may not know much about the food service operations.

When asked about the type of federal subsidy received by after-school care programs, SFA Managers most often replied that no federal subsidy was received (79%). Another 13% of the programs participate in the NSLP alone, 5% participate in the CACFP alone, and 3% receive subsidies from both the NSLP and CACFP (see Exhibit VII.11). Exhibit VII.12 shows a breakdown of SFAs that receive no federal subsidy for their after-school care programs. Private SFAs were less likely than public SFAs, small SFAs were less likely than large SFAs, and low poverty SFAs were less likely than high poverty SFAs to receive a federal subsidy. Again, this low rate of receipt of Federal subsidies may reflect a lack of knowledge on the part of SFA Managers.

When asked to list reasons why after-school care programs do not apply for federal subsidies, SFA Managers gave several reasons (Exhibit VII.13). These include not being sure if the program is eligible or how to apply for the subsidy (25%), feeling that the subsidy is not worth applying for (20%), the SFA is considering applying (12%), the cost of the snacks is already covered (8%), and simple unwillingness to apply (2%). Another 27% of the SFA Managers did not know why the after-school care program had not applied.

A follow-up question asked whether snacks were paid for out of the school food service account (Exhibit VII.14). This was rarely the case, with snacks or suppers paid for out of the food service account in only 9% of the SFAs. Large SFAs and high poverty SFAs were the most likely groups to pay for snacks.

Finally, SFA Managers were asked whether children are charged for snacks (Exhibit VII.15). Overall 15% of SFAs do not charge children for snacks, 12% do have a separate charge for snacks, and 73% include a charge for snacks as part of other program fees. The average price of a snack is 31 cents, based on the 12% of SFAs that do levy a separate charge for snacks.

Exhibit VII.11

Types of Federal Subsidies Received
by After-School Care Programs
(SY 1990-91)

Type of Subsidy	Percent of SFAs
NSLP subsidy only	13%
NSLP and CACFP	3
CACFP only	5
No Federal subsidy	79
Total SFAs (Weighted)	2,842

Ns and percentages are based on those SFAs that have after-school care programs and which provide snacks.

Data Source: Year Three SFA Manager Survey.

Exhibit VII.12

Percent of SFAs That Receive No Federal Subsidies
for After-School Care Programs
(SY 1990-91)

	Percent of SFAs
TOTAL SAMPLE	79%
Type of SFA	
Public	74*
Private	94
Participation in SBP	
NSLP and SBP	71
NSLP only	86
SFA Size	
Small (1-999)	95*
Medium (1,000-4,999)	78
Large (5,000+)‡	66
SFA Poverty Level	
60% or more F&R	44*
0-59% F&R	81
Total SFAs (Weighted)	2,842

Ns and percentages are based on those SFAs that have after-school programs and which provide snacks.

*Group difference 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 Three SFA Manager Survey.

Exhibit VII.13

Reasons Programs Do Not Apply for Federal Subsidies
for After-School Care Programs
(SY 1990-91)

Reason	Percent of SFAs
Not sure if eligible or how to apply	25%
Subsidy not worth it	20
Considering applying	12
Already covered	8
Don't want to	2
Other	8
Don't know	27
Total SFAs (Weighted)	2,249

Ns and percentages are based on those SFAs that have after-school care programs and provide snacks but receive no Federal subsidies.

Data Source: Year Three SFA Manager Survey.

Exhibit VII.14

Are Snacks or Suppers Paid Out of School Food Service Account
(SY 1990-91)

	Percent of SFAs
TOTAL SAMPLE	9%
Type of SFA	
Public	12
Private	3
Participation in SBP	
NSLP and SBP	16
NSLP only	5
SFA Size	
Small (1-999)	3
Medium (1,000-4,999)	9
Large (5,000+)‡	19
SFA Poverty Level	
60% or more F&R	19
0-59% F&R	9
Total SFAs (Weighted)	3,577

Ns and percentages are based on those SFAs that have after-school programs and which provide snacks.

*Group difference 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 Three SFA Manager Survey.

Exhibit VII.15

Are Children Charged for Snacks or Suppers
in After-School Care Programs
(SY 1990-91)

	Percent of SFAs		
	No	Yes	Included in Other Fees
Total Sample	15%	12%	73%
Type of SFA			
Public	17	12	71
Private	8	12	80
Participation SBP			
NSLP & SBP	18	11	72
NSLP Only	13	13	74
SFA Size			
Small (1-999)	6	14	80
Median (1000-4999)	23	7	70
Large (5000+)‡	16	15	68
SFA Poverty Level			
60% or more F&R	30	11	60
0-59% F&R	14	12	74
Total SFAs (Weighted)	2,326		

Ns and percentages based on SFAs that have after-school care programs and provide snacks.

* Group difference is statistically significant at the .01 level.

‡ Reference group used in comparisons of Large SFAs vs. small SFAs; Large SFAs vs. Medium SFAs.

Data Source: Year Three SFA Manager Survey

APPENDIX A
YEAR THREE SFA MANAGER SURVEY

OMB No. 05840375
Approval Expires: 12/31/92

1991 SCHOOL LUNCH SURVEY

INTRODUCTION

Hello, this is _____. 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. You may remember that we called you for this study last spring and I hope that you will be willing to help with the study this year.

X1. Recently, we sent you a letter and brochure describing the study and the types of information we need. The same letter was sent to over 1,700 school districts across the country. Do you remember the letter?

YES (SKIP TO Q.X3).....	1	14/
NO.....	2	

X2. Let me briefly describe what the study is about. The study is funded by the U.S. Department of Agriculture. It calls for an annual national survey of more than 1,700 school districts so that the Department can learn about several important issues related to the Child Nutrition Programs. This year, some of the issues to be covered in the survey include: commodity distribution and delivery, meal prices, school lunch participation, training and technical assistance needs, and after-school care for children.

X3. Is this a good time to do the interview?

YES (SKIP TO Q.X5).....	1	15/
NO.....	2	

X4. SCHEDULE CALL BACK. INDICATE ON FACE SHEET WHETHER REMAIL IS NEEDED. IF REMAIL, VERIFY RESPONDENT'S NAME AND ADDRESS.

X5. Since the interview covers many different topics, I may need to talk to more than one person. If, for any topic, you feel that you are not the best person to talk to, just tell me the name and telephone number of the person I will need to talk to.

SECONDARY RESPONDENT: _____

TITLE: _____

TELEPHONE # _____

1. NUMBER OF SCHOOLS

The first set of questions I have deals with the number of schools in the (NAME OF SCHOOL DISTRICT) school district and the number of schools that are participating in the National School Lunch Program or the School Breakfast Program for this, the 1990 to 1991, school year. Is it possible for you to provide information on the number of schools participating in these programs separately for elementary schools and then for a combination of middle and secondary schools?

YES (SKIP TO Q.1B).....	1	16/
NO (CONTINUE).....	2	

1A. ALL SCHOOLS

OK, then please answer the following questions for all the schools in your district.

1a1. In total, how many schools are there in your school district? ____ 17-20/

1a2. How many of them participate in the National School Lunch Program? ____ 21-24/

1a3. IF NOT ALL SCHOOLS PARTICIPATE IN THE LUNCH PROGRAM (COLS. 21-24 < COLS. 17-20), ASK:

Why do some schools not participate in the Lunch Program? RECORD VERBATIM AND PROBE FOR ALL REASONS.

_____ 25-26/
_____ 27-28/
_____ 29-30/

1a4. How many participate in the School Breakfast Program? ____ 31-34/

1a5. How many participate in the Breakfast Program as severe need schools? ____ 35-38/

SKIP TO QUESTION 2

1B. ELEMENTARY SCHOOLS

Before we begin, let me clarify that, for the purposes of this study, we are defining elementary schools as any school that has a kindergarten or Grade 1 or Grade 2 or Grade 3. Middle and secondary schools are those without a kindergarten, Grade 1, Grade 2 or Grade 3. For example, a K to 6, K to 8, K to 12, 1 to 8 or 3 to 6 school should be considered an elementary school. A 4 to 8, 6 to 8, 6 to 12 or 9 to 12 school should be considered a middle or secondary school.

1b1. Let's begin with elementary schools. How many elementary schools are there in your school district? _____ 39-42/

1b2. How many of them participate in the National School Lunch Program? _____ 43-46/

1b3. IF NOT ALL ELEMENTARY SCHOOLS PARTICIPATE IN THE LUNCH PROGRAM (COLS. 43-46 < COLS. 39-42), ASK:

Why do some elementary schools not participate in the Lunch Program? RECORD VERBATIM AND PROBE FOR ALL REASONS

_____ 47-48/
_____ 49-50/
_____ 51-52/

1b4. How many participate in the School Breakfast Program? _____ 53-56/

1b5. How many participate in the Breakfast Program as severe-need schools? _____ 57-60/

1C. MIDDLE/SECONDARY SCHOOLS

1c1. Now, for middle and secondary schools: how many middle and secondary schools are there in your school district? _____ 61-64/

1c2. How many of them participate in the National School Lunch Program? _____ 65-68/

1c3. IF NOT ALL MIDDLE AND SECONDARY SCHOOLS PARTICIPATE IN THE LUNCH PROGRAM (COLS. 65-68 < COLS. 61-64), ASK:

Why do some middle or secondary schools not participate in the Lunch Program? RECORD VERBATIM AND PROBE FOR ALL REASONS

_____ 69-70/
_____ 71-72/

1c4. How many participate in the School Breakfast Program? _____ 73-76/

1c5. How many participate in the Breakfast Program as severe need schools? _____ 77-80/

Card 2
12-13 02

SECONDARY RESPONDENT: _____

TITLE: _____

TELEPHONE # _____

2. ENROLLMENT

The next questions are about the number of children enrolled in your school district this year. Can you answer questions about enrollment separately for elementary and then for middle and secondary schools combined?

YES (SKIP TO Q.2B).....	1	14/
NO (CONTINUE).....	2	

2A. ALL SCHOOLS

OK, then please answer the following questions for all the schools in your district.

2a1. In total, how many children were enrolled in your school district as of October 1st, 1990? _____ 15-20/

ALSO RECORD ON WORKSHEET UNDER COLUMN A

2a2. How many of these children had the opportunity to participate in the School Lunch Program? That is, exclude any child who is ordinarily in school for a half-day and is not offered lunch, such as half-day kindergarteners. _____ 21-26/

ALSO RECORD ON WORKSHEET UNDER COLUMN B

2a3.

ASK ONLY IF SOME CHILDREN DO NOT HAVE THE OPPORTUNITY TO PARTICIPATE IN THE SCHOOL LUNCH PROGRAM.

You indicated that some of the children enrolled in your district do not have the opportunity to participate in the School Lunch Program; why don't these children have the opportunity to participate? PROBE FOR ALL REASONS.

SCHOOL DOES NOT SERVE LUNCH.....	01	27-28/
HALF-DAY PUPIL	02	29-30/
OTHER (SPECIFY)_____	96	31-32/

_____

_____

2a4. How many children enrolled in your school district had the opportunity to participate in the School Breakfast Program?

_____ 33-38/

2a5.

ASK ONLY IF SOME CHILDREN DO NOT HAVE THE OPPORTUNITY TO PARTICIPATE IN THE SCHOOL BREAKFAST PROGRAM.

Why don't all of the children in your district have the opportunity to participate in the School Breakfast Program? PROBE FOR ALL REASONS.

SCHOOL DOES NOT SERVE BREAKFAST.....01 39-40/
HALF-DAY (AFTERNOON ONLY) PUPILS.....02 41-42/
OTHER (SPECIFY)_____ 96 43-44/

_____
_____
_____

2a6. Has the racial mix of children in your school district changed substantially from last year?

YES.....	1	45/
NO (SEE LABEL).....	2	
DON'T KNOW (SEE LABEL).....	8	

2a7. How many children in your district are ...

American Indian or Alaskan Native...	_____	46-50/
Asian or Pacific Islander.....	_____	51-55/
Black, not of Hispanic origin.....	_____	56-61/
Hispanic.....	_____	62-67/
White, not of Hispanic origin.....	_____	68-73/

2a8. **ASK ONLY IF INDICATED ON FACE SHEET**

How many are female? _____ 74-79/

SKIP TO QUESTION 3

Card 3
12-13/03

2B. ELEMENTARY SCHOOLS

2b1. Let's begin with elementary schools. How many children were enrolled in elementary schools in your school district as of October 1, 1990? _____ 14-19/

ALSO RECORD ON WORKSHEET UNDER COLUMN A

2b2. How many of these children had the opportunity to participate in the School Lunch Program? That is, exclude any child who is ordinarily in school for a half-day and is not offered lunch, such as half-day kindergarteners. _____ 20-25/

ALSO RECORD ON WORKSHEET UNDER COLUMN B

2b3.

ASK ONLY IF SOME CHILDREN IN ELEMENTARY SCHOOLS DO NOT HAVE THE OPPORTUNITY TO PARTICIPATE IN THE SCHOOL LUNCH PROGRAM.

You indicated that some of the children in your elementary schools do not have the opportunity to participate in the School Lunch Program; why don't these children have the opportunity to participate? PROBE FOR ALL REASONS.

SCHOOL DOES NOT SERVE LUNCH.....	01	26-27/
HALF-DAY PUPIL	02	28-29/
OTHER (SPECIFY)_____	96	30-31/

_____

_____

_____

2b4. How many children had the opportunity to participate in the School Breakfast Program? _____ 32-37/

2b5.

ASK ONLY IF SOME CHILDREN IN ELEMENTARY SCHOOLS DO NOT HAVE THE OPPORTUNITY TO PARTICIPATE IN THE SCHOOL BREAKFAST PROGRAM.

What are the reasons that some of the children in your elementary schools do not have the opportunity to participate in the School Breakfast Program? PROBE FOR ALL REASONS.

SCHOOL DOES NOT SERVE BREAKFAST.....	01	38-39/
HALF-DAY (AFTERNOON ONLY) PUPIL.....	02	40-41/
OTHER (SPECIFY)_____	96	42-43/

_____

_____

_____

2b6. Has the racial mix of children in your schools changed substantially from last year?

YES.....	1	44/
NO (SEE LABEL).....	2	
DON'T KNOW (SEE LABEL).....	8	

2b7. How many children in your elementary schools are ...

American Indian or Alaskan Native	____	45-49/
Asian or Pacific Islander	____	50-54/
Black, not of Hispanic origin	____	55-60/
Hispanic	____	61-66/
White, not of Hispanic origin	____	67-72/

2b8. **|ASK ONLY IF INDICATED ON FACE SHEET|**

How many children in your elementary schools are female? ____ 73-78/

2C. MIDDLE/SECONDARY SCHOOLS

CARD 4
12-13/04

2c1. Now, for middle and secondary schools: How many children were enrolled in middle and secondary schools in your school district as of October 1, 1990? _____ 14-19/

ALSO RECORD ON WORKSHEET UNDER COLUMN A

2c2. How many of these children had the opportunity to participate in the School Lunch Program? _____ 20-25/

ALSO RECORD ON WORKSHEET UNDER COLUMN B

2c3.

ASK ONLY IF SOME CHILDREN IN MIDDLE/SECONDARY SCHOOLS DO NOT HAVE THE OPPORTUNITY TO PARTICIPATE IN THE SCHOOL LUNCH PROGRAM.

You indicated that some of the children in your middle or secondary schools do not have the opportunity to participate in the School Lunch Program; why don't these children have the opportunity to participate? PROBE FOR ALL REASONS.

SCHOOL DOES NOT SERVE LUNCH.....01 26-27/
OTHER (SPECIFY)_____ 96 28-29/
_____ 30-31/
_____

2c4. How many had the opportunity to participate in the School Breakfast Program? _____ 32-37/

2c5.

ASK ONLY IF SOME CHILDREN IN MIDDLE/SECONDARY SCHOOLS DO NOT HAVE THE OPPORTUNITY TO PARTICIPATE IN THE SCHOOL BREAKFAST PROGRAM.

What are the reasons that some of the children in your middle or secondary schools do not have the opportunity to participate in the School Breakfast Program? PROBE FOR ALL REASONS.

SCHOOL DOES NOT SERVE BREAKFAST.....01 38-39/
OTHER (SPECIFY)_____ 96 40-41/
_____ 42-43/
_____

2c6. Has the racial mix of children in your schools changed substantially from last year?

YES.....	1	44/
NO (SEE LABEL).....	2	
DON'T KNOW (SEE LABEL).....	8	

2c7. How many children in your your middle and secondary schools are ...

American Indian or Alaskan Native...	_____	45-49/
Asian or Pacific Islander.....	_____	50-54/
Black, not of Hispanic origin.....	_____	55-60/
Hispanic.....	_____	61-66/
White, not of Hispanic origin.....	_____	67-72/

Card 5
12-13/04

ASK ONLY IF INDICATED ON FACE SHEET

2c8. How many children in your middle and secondary schools are female? _____ 14-19/

SECONDARY RESPONDENT: _____

TITLE: _____

TELEPHONE # _____

3. CHILDREN APPROVED

The next questions have to do with the number of children approved for free and reduced-price meals as of October 31 of this school year, that is, October 31, 1990. Can you provide information on the number of approved children separately for elementary schools and then for your middle and secondary schools combined?

YES (SKIP TO Q.3B)..... 1 20/
NO (CONTINUE)..... 2

3A. ALL SCHOOLS

3a1. OK, then please answer the following questions for all the schools in your district. For all schools, how many children were approved for free meals by October 31st of this school year? ____ 21-26/

ALSO RECORD ON WORKSHEET UNDER COLUMN C

3a2. For all schools, how many children were approved for reduced-price meals by October 31st of this school year? ____ 27-32/

3a3. For all schools, how many children applied but were denied free or reduced-price meals this school year? ____ 33-38/

SKIP TO Q.4

3B. ELEMENTARY SCHOOLS

3b1. OK, first, for elementary schools, how many children were approved for free meals by October 31st of this school year? _____ 39-44/

ALSO RECORD ON WORKSHEET UNDER COLUMN C

3b2. For elementary schools, how many children were approved for reduced-price meals by October 31st of this school year? _____ 45-50/

3b3. For elementary schools, how many children applied but were denied free or reduced-price meals this school year? _____ 51-56/

3C. MIDDLE/SECONDARY SCHOOLS

3c1. Next, for middle and secondary schools, how many children were approved for free meals by October 31st of this school year? _____ 57-62/

ALSO RECORD ON WORKSHEET UNDER COLUMN C

3c2. For middle and secondary schools, how many children were approved for reduced-price meals by October 31st of this school year? _____ 63-68/

3c3. For middle and secondary schools, how many children applied but were denied free or reduced-price meals this school year? _____ 69-74/

Card 6
12-13 06

SECONDARY RESPONDENT: _____

TITLE: _____

TELEPHONE # _____

4. AVERAGE DAILY ATTENDANCE

The next questions are about average daily attendance in your school district for the month of October 1990. Can you provide information on average daily attendance separately for elementary schools and then for middle and secondary schools?

YES (SKIP TO Q.4B).....	1	14/
NO (CONTINUE).....	2	

4A. ALL SCHOOLS

OK, then please answer for all the schools in your district. What was the average daily attendance for all children in your school district for the month of October, 1990? _____ 15-20/

ALSO RECORD ON WORKSHEET UNDER COLUMN D

SKIP TO QUESTION 5

4B. ELEMENTARY SCHOOLS

Let's begin with elementary schools again. What was the average daily attendance for elementary school children in your school district for the month of October, 1990? _____ 21-26/

ALSO RECORD ON WORKSHEET UNDER COLUMN D

4C. MIDDLE AND SECONDARY SCHOOLS

What was the average daily attendance for middle and secondary school children in your school district for the month of October, 1990? _____ 27-32/

ALSO RECORD ON WORKSHEET UNDER COLUMN D

SECONDARY RESPONDENT: _____

TITLE: _____

TELEPHONE # _____

5. OPERATING DAYS

The next set of questions is about the total number of operating days for the School Lunch and School Breakfast Programs during last school year, that is, during school year 1989-90. Can you provide this information separately for elementary and then for middle and secondary schools?

YES (SKIP TO Q.5B)..... 1 33/
NO (CONTINUE)..... 2

5A. ALL SCHOOLS

5a1. OK, then for all schools in your district, how many operating days were there in the School Lunch Program last school year? _____ 34-36/

ALSO RECORD ON WORKSHEET UNDER COLUMN E

5a2.** Did any of your schools have a breakfast program last year?

YES.....1 37/
NO (SKIP TO Q.6).....2

5a3. For all schools, how many operating days were there in the School Breakfast Program last school year? _____ 38-40/

SKIP TO Q.6

5B. ELEMENTARY SCHOOLS

5b1. For elementary schools, how many operating days were there in the School Lunch Program last school year? _____ 41-43/

ALSO RECORD ON WORKSHEET UNDER COLUMN E

5b2.** Did any of your elementary schools have a breakfast program last year?

YES.....1
NO (SKIP TO Q.5c1).....2 44/

5b3. For elementary schools, how many operating days were there in the School Breakfast Program last school year? _____ 45-47/

5C. MIDDLE/SECONDARY SCHOOLS

5c1. For middle and secondary schools, how many operating days were there in the School Lunch Program last school year? _____ 48-50/

ALSO RECORD ON WORKSHEET UNDER COLUMN E

5c2.** Did any of your middle or secondary schools have a breakfast program last year?

YES.....1
NO (SKIP TO Q.6).....2 51/

5c2. For middle and secondary schools, how many operating days were there in the School Breakfast Program last school year? _____ 52-54/

SECONDARY RESPONDENT: _____

TITLE: _____

TELEPHONE # _____

6. REIMBURSABLE LUNCHES

Now I have some questions about the number of reimbursable lunches served and claimed last school year, that is, during school year 1989-90. Can you answer questions about reimbursable lunches first for all your elementary schools, and then for a combination of your middle and secondary schools?

YES (SKIP TO Q.6B).....	1	55/
NO (CONTINUE).....	2	

6A. ALL SCHOOLS

OK, then please answer the following questions for all the schools in your district.

6a1. For all schools, how many free lunches were served to children and claimed for reimbursement in the School Lunch Program last year? _____ 56-64/

ALSO RECORD ON WORKSHEET UNDER COLUMN F

6a2. For all schools, how many reduced-price lunches were served to children and claimed for reimbursement in the School Lunch Program last year? _____ 65-73/

Card 7
12-13/07

6a3. For all schools, how many full-price lunches were served to children and claimed for reimbursement in the School Lunch Program last year? _____ 14-22/

SKIP TO QUESTION 7

6B. ELEMENTARY SCHOOLS

Let's begin with elementary schools.

6b1. For elementary schools, how many free lunches were served to children and claimed for reimbursement in the School Lunch Program last year? _____ 23-31/

ALSO RECORD ON WORKSHEET UNDER COLUMN F

6b2. For elementary schools, how many reduced-price lunches were served to children and claimed for reimbursement in the School Lunch Program last year? _____ 32-40/

6b3. For elementary schools, how many full-price lunches were served to children and claimed for reimbursement in the School Lunch Program last year? _____ 41-49/

6C. MIDDLE/SECONDARY SCHOOLS

6c1. **Next, for middle and secondary schools: How many free lunches were served to children and claimed for reimbursement in the School Lunch Program last year?** _____ 50-58/

ALSO RECORD ON WORKSHEET UNDER COLUMN F

6c2. **For middle and secondary schools, how many reduced-price lunches were served to children and claimed for reimbursement in the School Lunch Program last year?** _____ 59-67/

6c3. **For middle and secondary schools, how many full-price lunches were served to children and claimed for reimbursement in the School Lunch Program last year?** _____ 68-76/

Card 8
12-13/08

SECONDARY RESPONDENT: _____

TITLE: _____

TELEPHONE # _____

REFER TO QUESTION 5 ON PAGES 13-14. IF NO BREAKFASTS SERVED LAST YEAR CHECK THE BOX AND SKIP TO QUESTION 8.** ☐ 1 14/

7. REIMBURSABLE BREAKFASTS

The next set of questions are about the number of reimbursable breakfasts served and claimed last school year, that is, during school year 1989-90. Can you provide information on the number of reimburseable breakfasts first for all your elementary schools, and then for a combination of your middle and secondary schools?

YES (SKIP TO Q.7B)..... 1 15/
NO (CONTINUE)..... 2

7A. ALL SCHOOLS

7a1. **OK, then for all schools, how many free breakfasts were served to children and claimed for reimbursement in the School Breakfast Program last year?** _____ 16-24/

7a2. **For all schools, how many reduced-price breakfasts were served to children and claimed for reimbursement in the School Breakfast Program last year?** _____ 25-33/

7a3. **For all schools, how many full-price breakfasts were served to children and claimed for reimbursement in the School Breakfast Program last year?** _____ 34-42/

SKIP TO Q. 8.

7B. ELEMENTARY SCHOOLS

7b1. OK, first for elementary schools, how many free breakfasts were served to children and claimed for reimbursement in the School Breakfast Program last year? _____ 43-51/

7b2. For elementary schools, how many reduced-price breakfasts were served to children and claimed for reimbursement in the School Breakfast Program last year? _____ 52-60/

7b3. For elementary schools, how many full-price breakfasts were served to children and claimed for reimbursement in the School Breakfast Program last year? _____ 61-69/

7C. MIDDLE/SECONDARY SCHOOLS

7c1. For middle and secondary schools, how many free breakfasts were served to children and claimed for reimbursement in the School Breakfast Program last year? _____ 70-78/

Card 9
12-13/09

7c2. For middle and secondary schools, how many reduced-price breakfasts were served to children and claimed for reimbursement in the School Breakfast Program last year? _____ 14-22/

7c3. For middle and secondary schools, how many full-price breakfasts were served to children and claimed for reimbursement in the School Breakfast Program last year? _____ 23-31/

SECONDARY RESPONDENT: _____

TITLE: _____

TELEPHONE # _____

8. LUNCH PRICES

Now I have questions about your lunch prices for this current school year. First I will ask you about lunch prices in your elementary schools, then about prices in your middle schools, and then in your secondary schools. If you have more than one standard reimbursable lunch, please give me the price for the one that is purchased most frequently.

SCHOOL DOES NOT CHARGE STUDENTS FOR LUNCH (SKIP TO Q.9) 1 32/

8A. ELEMENTARY SCHOOLS

8a1. For elementary schools, what price did you charge at the start of this school year for a standard reimbursable school lunch for children who pay full price? $___.___ 33-35/

8a2. What price did you charge at the start of this school year for children who pay reduced-price? $___.___ 36-38/

8a3. Did the prices charged for your elementary school lunches change since the beginning of this school year?

YES..... 1 39/
NO (SKIP TO Q.8a5)..... 2
DON'T KNOW (SKIP TO Q.8a5)..... 8

8a4. What did the price change to for (READ LIST. IF NO CHANGE, RECORD CURRENT PRICE)

Full Price $___.___ 40-42/

Reduced Price $___.___ 43-45/

8a5. Does the price of a standard reimbursable lunch differ between your middle and secondary schools?

YES..... 1 46/
NO (SKIP TO Q.8c1)..... 2
DON'T KNOW (SKIP TO Q.8c1)..... 8

8B. MIDDLE SCHOOLS

8b1. For middle schools, what price did you charge at the start of this school year for a standard reimbursable school lunch for children who pay full price? $___.___ 47-49/

8b2. What price did you charge at the start of this school year for children who pay reduced-price? $___.___ 50-52/

8b3. Did the prices charged for your middle school lunches change since the beginning of this school year?

YES	1	53/
NO (SKIP TO Q.8c1)	2	
DON'T KNOW (SKIP TO Q.8c1)	8	

8b4. What did the price change to for . . . (READ LIST. IF NO CHANGE, RECORD CURRENT PRICE)

Full Price	$___.___	54-56/
Reduced Price	$___.___	57-59/

8C. SECONDARY SCHOOLS

8c1. For secondary schools, what price did you charge at the start of this school year for a standard reimbursable school lunch for children who pay full price? $___.___ 60-62/

8c2. What price did you charge at the start of this school year for children who pay reduced-price? $___.___ 63-65/

8c3. Did the price charged for your secondary school lunches change since the beginning of this school year?

YES	1	66/
NO (SKIP TO Q.9)	2	
DON'T KNOW (SKIP TO Q.9)	8	

8c4. What did the price change to for ... (READ LIST. IF NO CHANGE, RECORD CURRENT PRICE)

Full Price	$___.___	67-69/
Reduced Price	$___.___	70-72/

SECONDARY RESPONDENT: _____

TITLE: _____

TELEPHONE # _____

9. BREAKFAST PRICES

NO SCHOOLS SERVE BREAKFAST, (SKIP TO Q.10)..... 1 73/

The next questions are about your breakfast prices for this school year. First I will ask you about breakfast prices in your elementary schools, then about prices in your middle schools, and then in your secondary schools. If you have more than one standard reimbursable breakfast, please give me the price for the one that is purchased most frequently.

SCHOOL DOES NOT CHARGE STUDENTS FOR BREAKFAST
(SKIP TO Q.10) 1 74/

Card 10
12-13/10

9A. ELEMENTARY SCHOOLS

9a1. For elementary schools, what price did you charge at the start of this school year for a standard reimbursable school breakfast for children who pay full price? $___.___ 14-16/

9a2. What price did you charge at the start of this school year for children who pay reduced-price? $___.___ 17-19/

9a3. Did the prices charged for your elementary school breakfasts change since the beginning of this school year?

YES..... 1 20/
NO (SKIP TO Q.9a5)..... 2
DON'T KNOW (SKIP TO Q.9a5)..... 8

9a4. What did the price change to for . . . (READ LIST. IF NO CHANGE, RECORD CURRENT PRICE)

Full Price $___.___ 21-23/

Reduced Price $___.___ 24-26/

9a5. Does the price of a standard reimbursable breakfast differ between your middle and secondary schools?

YES..... 1 27/
NO (SKIP TO Q.9c1)..... 2
DON'T KNOW (SKIP TO Q.9c1)..... 8

9B. MIDDLE SCHOOLS

9b1. For middle schools, what price did you charge at the start of this school year for a standard reimbursable school breakfast for children who pay full price? $___.___ 28-30/

9b2. What price did you charge at the start of this school year for children who pay reduced-price? $___.___ 31-33/

9b3. Did the prices charged for your middle school breakfasts change since the beginning of this school year?

YES.....	1	34/
NO (SKIP TO Q.9c1).....	2	
DON'T KNOW (SKIP TO Q.9c1).....	8	

9b4. What did the price change to for . . . (READ LIST. IF NO CHANGE, RECORD CURRENT PRICE)

Full Price	$___.___	35-37/
Reduced Price	$___.___	38-40/

9C. SECONDARY SCHOOLS

9c1. For secondary schools, what price did you charge at the start of this school year for a standard reimbursable school breakfast for children who pay full price? $___.___ 41-43/

9c2. What price did you charge at the start of this school year for children who pay reduced-price? $___.___ 44-46/

9c3. Did the price charged for your secondary school breakfasts change since the beginning of this school year?

YES.....	1	47/
NO (SKIP TO Q.10).....	2	
DON'T KNOW (SKIP TO Q.10).....	8	

9c4. What did the price change to for . . . (READ LIST. IF NO CHANGE, RECORD CURRENT PRICE)

Full Price	$___.___	48-50/
Reduced Price	$___.___	51-53/

SECONDARY RESPONDENT: _____

TITLE: _____

TELEPHONE # _____

10. FOOD DONATION PROGRAM

The next series of questions relates to the Commodity Donation Program.

10A. DIRECT DELIVERY OF USDA COMMODITIES |__|-1 54/

COMPLETE SECTION 10A ONLY IF INDICATED ON FACE SHEET. IF 10A WILL NOT BE COMPLETED; SKIP TO SECTION 10B ON PAGE 25 .

10a1. First, I have some questions about delivery of commodities. How often do you receive advance written notification regarding commodity deliveries? Do you receive written notice...

All of the time (SKIP TO Q.10a5)....	1	55/
Most of the time.....	2	
Some of the time, or.....	3	
Never (SKIP TO Q.10a7).....	4	
DON'T KNOW (SKIP TO Q.10a7).....	8	

10a2. Approximately what percentage of commodity deliveries arrive without advance written notification? Would you say...

80 - 100%.....	1	56/
60 - 79%.....	2	
40 - 59%.....	3	
20 - 39% or.....	4	
0 - 19%.....	5	

10a3. Do you tend to receive written notification regarding deliveries for certain types of commodities more than others?

YES.....	1	57/
NO (SKIP TO Q.10a5).....	2	
DON'T KNOW (SKIP TO Q.10a5).....	8	

10a4. Which types of commodities are most frequently delivered to you without advance written notification? (DO NOT READ LIST; CIRCLE ALL THAT APPLY.)

DAIRY PRODUCTS.....	1	58/
FRUITS.....	2	59/
GRAIN PRODUCTS.....	3	60/
MEAT, POULTRY, FISH.....	4	61/
NUTS, HONEY AND OILS.....	5	62/
VEGETABLES.....	6	63/

10a5. In general, how many days in advance do you receive written notification regarding commodity deliveries?

_____ day(s)	....	64-65/
DON'T KNOW.....	98	

10a6. Who notifies you about impending deliveries? (DO NOT READ LIST; CIRCLE ALL THAT APPLY.)

STATE AGENCY.....	1	66/
FOOD PROCESSOR OR MANUFACTURER.....	2	67/
VENDOR OR SUPPLIER.....	3	68/
OTHER (SPECIFY)_____	6	69/
_____		70-71/
DON'T KNOW.....	8	72-73/

10a7. How often do truck drivers call you to make unloading appointments? Do they call...

All of the time (SKIP TO Q.10a11)...	1	74/
Most of the time.....	2	
Some of the time, or.....	3	
Never (SKIP TO Q.10b1).....	4	

10a8. Approximately what percentage of deliveries arrive without unloading appointments? Would you say...

80 - 100%.....	1	75/
60 - 79%.....	2	
40 - 59%.....	3	
20 - 39% or.....	4	
0 - 19%.....	5	

10a9. Do drivers tend to call for unloading appointments for certain types of commodities more than others?

YES	1	14/
NO (SKIP TO Q.10a11)	2	
DON'T KNOW (SKIP TO Q.10a11)	8	

10a10. Which types of commodities most frequently arrive without unloading appointments? (DO NOT READ LIST; CIRCLE ALL THAT APPLY.)

DAIRY PRODUCTS	1	15/
FRUITS	2	16/
GRAIN PRODUCTS	3	17/
MEAT, POULTRY, FISH	4	18/
NUTS, HONEY AND OILS	5	19/
VEGETABLES	6	20/

10a11. In general, how many hours in advance do drivers call you to schedule unloading appointments?

_____ hour(s)		21-22/
DON'T KNOW	98	

10B. USE OF COMMODITY FLOUR

10b1. The next questions concern USDA commodity flour. Do you receive USDA Commodity Flour?

YES	1	23/
NO (SKIP TO Q.10b6)	2	
DON'T KNOW (SKIP TO Q.10b6)	8	

10b2. How much of the USDA flour you receive is used in-house, that is, in preparing food items in your own kitchens? Would you say...

All of the flour	1	24/
Most of the flour	2	
Some of the flour, or	3	
None of the flour (SKIP TO Q.10b4)	4	
DON'T KNOW	8	

10b3. Which specific food items do you make in your own kitchens using USDA flour? (DO NOT READ LIST; CIRCLE ALL THAT APPLY.)

BREADS, ROLLS	1	25/
MUFFINS, BISCUITS	2	26/
CAKES, PIES, COOKIES	3	27/
PIZZA	4	28/
OTHER (SPECIFY)_____	6	29/
_____		30-31/
DON'T KNOW	8	32-33/

10b4. How much of the USDA flour you receive is used externally, that is, used by outside food processors to prepare specific processed food items? Would you say...

All of the flour.....	1	34/
Most of the flour.....	2	
Some of the flour or.....	3	
None of the flour (SKIP TO Q.10b6)..	4	
DON'T KNOW.....	8	

10b5. Which specific food items are prepared by food processors using USDA flour? (DO NOT READ LIST; CIRCLE ALL THAT APPLY.)

BREADS, ROLLS.....	1	35/
MUFFINS, BISCUITS.....	2	36/
CAKES, PIES, COOKIES.....	3	37/
PIZZA.....	4	38/
CRACKERS.....	5	39/
OTHER (SPECIFY)_____	6	40/
_____		41-42/
DON'T KNOW.....	8	43-44/

10b6. Do you use any food items containing USDA flour that are produced under a National Commodity Processing NCP, contract?

YES.....	1	45/
NO (SKIP TO Q.10c1).....	2	
DON'T KNOW (SKIP TO Q.10c1).....	8	

READ THE EXPLANATION BELOW TO RESPONDENTS WHO ARE NOT FAMILIAR WITH THE NCP PROGRAM, OR DO NOT SEEM TO UNDERSTAND Q.10b6.

National Commodity Processing (NCP) Contracts

Food items produced under NCP contracts are manufactured by food processors that have agreements with FNS to process specific bonus commodities like butter, flour and cornmeal into usable end products like pizza crust, pasta products, bread and rolls. Processors then sell these products at a reduced price to schools participating in the School Lunch Program or to other participant agencies. In order to purchase NCP products, schools must be registered with FNS.

10b7. Which specific NCP food items containing USDA flour do you purchase? (DO NOT READ LIST; CIRCLE ALL THAT APPLY.)

BREADS, ROLLS.....	1	46/
MUFFINS, BISCUITS.....	2	47/
CAKES, PIES, COOKIES.....	3	48/
PIZZA CRUST.....	4	49/
TORTILLA SHELLS.....	5	50/
PASTA PRODUCTS.....	6	51/
OTHER (SPECIFY)_____	9	52/
_____		53-54/
DON'T KNOW.....	8	55-56/

10C. BEEF PATTIES

Now I have a few questions about beef patties.

10c1. We are interested in agreements initiated locally between your school district and one or more food processors, as well as agreements that are initiated at the state level. Do you have a processing agreement for the preparation of hamburger patties?

YES.....	1	57/
NO (SKIP TO Q.10c3).....	2	
DON'T KNOW (SKIP TO Q.10c3).....	8	

10c2. Why don't you order all your hamburger patties from USDA? (DON'T READ LIST; CIRCLE ALL THAT APPLY.)

UNAWARE OF AVAILABILITY.....	1	58/
DISLIKE SIZE OF PATTY.....	2	59/
DISLIKE SHAPE OF PATTY.....	3	60/
DISLIKE TEXTURE OF PATTY.....	4	61/
DESIRE TO INCORPORATE T.V.P.....	1	62/
USDA PATTIES ARE TOO HIGH IN FAT....	2	63/
USDA PATTIES ARE TOO LOW IN FAT.....	3	64/
STATE RESTRICTS SFA'S ORDERS IN SOME WAY.....	4	65/
OTHER (SPECIFY)_____	6	66/
_____		67-68/
DON'T KNOW.....	8	69-70/

10c3. Do you prefer beef patties from USDA or patties from a commercial vendor? (PROBE TO DETERMINE WHICH PATTIES ARE PREFERRED.)

USDA.....	1	71/
COMMERCIAL VENDOR.....	2	
NEITHER (PREFERS OWN).....	3	

10c4. Why do you prefer the patties you (receive from (USDA/ COMMERCIAL VENDOR) make yourself)?

_____ 72-73/

_____ 74-75/

_____ 76-77/

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12-13/12

10D. BUYING CYCLES

Now I have a few questions concerning the pattern in which you receive your USDA commodities. USDA is aware of the problems in food donation that occurred last year. In responding to this series of questions, please focus on this year's donations.

10d1. What percent of your total annual USDA commodities has been made available to you during the...(READ LIST.)

first quarter of the school year?
(July 1 - September 30) _____% 14-16/

second quarter of the school year?
(October 1 - December 31) _____% 17-19/

third quarter of the school year?
(January 1 - March 31) _____% 20-22/

10d2. Are you satisfied with the current timing of commodity deliveries?

YES (SKIP TO Q.10d6).....	1	23/
NO.....	2	
DON'T KNOW.....	8	

10d3. Would you like to see changes in the timing of deliveries of USDA commodities?

YES.....	1	24/
NO (SKIP TO Q.10d6).....	2	
DON'T KNOW (SKIP TO Q.10d6).....	8	

10d4. What specific changes would you like to see, and why?

_____ 25-26/

_____ 27-28/

_____ 29-30/

10d5. What percent of your USDA commodities would you like to receive during the...(READ LIST.)

first quarter of the school year? (July 1 - September 30)	_____%	31-33/
second quarter of the school year? (October 1 - December 31)	_____%	34-36/
third quarter of the school year? (January 1 - March 31)	_____%	37-39/
fourth quarter of the school year? (April 1 - June 30)	_____%	40-42/

10d6. Do you receive notification from your State Agency about expected commodity donations in ample time to adjust your purchasing patterns?

YES	1	43/
NO	2	
DON'T KNOW	8	

10d7. How often are you able to negotiate approximate delivery dates for your commodity shipments? Would you say that you are able to negotiate delivery dates...

All of the time	1	44/
Most of the time	2	
Some of the time or	3	
None of the time	4	
DON'T KNOW	8	

10E. CHANGES IN BONUS COMMODITY DONATIONS

The next questions deal with changes in bonus commodity donations.

10e1. As you know, a number of factors have led to a significant reduction in the level of USDA bonus commodity donations of dairy products such as cheese, butter and non-fat dry milk. Has this change had any effect on your food service program?

YES	1	45/
NO (SKIP TO Q.11)	2	
DIDN'T KNOW BONUS LEVEL HAD CHANGED (SKIP TO Q.11)	3	
DON'T KNOW (SKIP TO Q.11)	8	

10e2. What specific effects do you attribute to decreased availability of bonus commodities? (DO NOT READ LIST; CIRCLE ALL THAT APPLY.) PROBE FOR RESPONSE TO INCREASED COSTS

INCREASED LUNCH PRICES (ASK 10e3).....	1	46/
INCREASED BREAKFAST PRICES.....	2	47/
CHANGE IN MENU.....	3	48/
DECREASED PARTICIPATION.....	4	49/
FORCED TO USE MORE CONVENIENCE ITEMS.....	5	50/
OTHER (SPECIFY)_____	6	51/
_____		52-53/
		54-55/

10e3. **ASK ONLY IF LUNCH PRICES WERE INCREASED (SEE ANSWER TO Q.10e2, ABOVE.) OTHERWISE SKIP TO Q.10e4)**

You mentioned that you had increased lunch prices. What percentage of the increase would you attribute to reductions in bonus commodities?

_____ percent 56-58/

10e4. **As a result of the decrease in bonus commodities have you increased the amount or types of commercial foods you purchase?**

YES.....	1	59/
NO.....	2	
DON'T KNOW.....	8	

10e5. **Are you currently purchasing any of the following items commercially because of the decrease in USDA donations: (READ LIST; CIRCLE A RESPONSE FOR EACH ITEM.)**

	Yes	No	
Processed cheese.....	1	2	60/
Mozzarella cheese.....	1	2	61/
Non-fat dry milk.....	1	2	62/
Honey.....	1	2	63/

SECONDARY RESPONDENT: _____

TITLE: _____

TELEPHONE # _____

11. TECHNICAL ASSISTANCE

The next questions deal with technical assistance issues. I have a few questions related to nutritional analysis of menus, and the recently formed Food Service Management Institute.

11A. NUTRITIONAL ANALYSIS OF MENUS

11a1. 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	64/
NO (SKIP TO Q.11a9)	2	
DON'T KNOW (SKIP TO Q.11a10)	8	

11a2. Does someone on your staff usually perform this analysis, or do you usually have an outside consultant or agency, including the state agency, take care of it? (DO NOT READ LIST; CIRCLE ONE ANSWER.)

SFA STAFF MEMBER	1	65/
STATE AGENCY	2	
OUTSIDE CONSULTANT OR AGENCY (SPECIFY)___	3	
_____		66-67/
OTHER (SPECIFY)_____	6	
_____		68-69/
DON'T KNOW	8	

11a3. How is the analysis actually done? Is a computer program usually used or is the analysis usually done by hand? (CIRCLE ONE ANSWER.)

COMPUTER PROGRAM (SKIP TO Q.11a5)	1	70/
HAND-CALCULATIONS	2	
DON'T KNOW	8	

11a4. Why isn't the analysis done using a computerized system? (DO NOT READ LIST; CIRCLE ALL THAT APPLY)

NOT AWARE OF COMPUTER SYSTEMS	1	71/
NO ACCESS TO COMPUTER	2	72/
NO BUDGET FOR COMPUTER ANALYSIS	3	73/
CONSULTANT DOESN'T HAVE SOFTWARE	4	74/
OTHER (SPECIFY)_____	6	75/
_____		76-77/
DON'T KNOW	8	78-79/

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11a5. Does the nutritional analysis actually affect your menu planning process? That is, are there specific nutritional goals that you try to meet in your planned menus?

YES	1	14/
NO (SKIP TO Q.11a8)	2	
DON'T KNOW (SKIP TO Q.11a8)	8	

11a6. Which specific nutrients do you evaluate, and what are the target levels you try to achieve in your planned menues? DO NOT READ LIST. CIRCLE ALL THAT APPLY. FOR EACH NUTRIENT MENTIONED, RECORD TARGET LEVEL: ENTER NUMBER AND CIRCLE APPROPRIATE UNIT OF MEASURE. IF NO TARGET LEVEL, WRITE "NA" UNDER "TARGET LEVEL".

DON'T KNOW WHICH NUTRIENTS (SKIP TO Q.11a7)..... 1 15/

NUTRIENT EVALUATED		TARGET LEVEL		UNIT OF MEASURE (%RDA / MILLI GRAMS / OTHER)		(SPECIFY)	
CALORIES.....1	16/	_____	17-20/	1.....2.....3	21/	_____	22/
CARBOHYDRATE.....2	23/	_____	24-27/	1.....2.....3	28/	_____	29/
CHOLESTEROL.....3	30/	_____	31-34/	1.....2.....3	35/	_____	36/
FAT - SATURATED....4	37/	_____	38-41/	1.....2.....3	42/	_____	43/
FAT - UNSATURATED..1	44/	_____	45-48/	1.....2.....3	49/	_____	50/
FAT - TOTAL.....2	51/	_____	52-55/	1.....2.....3	56/	_____	57/
IRON.....3	58/	_____	59-62/	1.....2.....3	63/	_____	64/
NIACIN.....4	65/	_____	66-69/	1.....2.....3	70/	_____	71/
PROTEIN.....1	72/	_____	73-76/	1.....2.....3	77/	_____	78/
RIBOFLAVIN.....2	14/	_____	15-18/	1.....2.....3	19/	_____	20/
SODIUM.....3	21/	_____	22-25/	1.....2.....3	26/	_____	27/
THIAMIN.....4	28/	_____	29-32/	1.....2.....3	33/	_____	34/
VITAMIN A.....1	35/	_____	36-39/	1.....2.....3	40/	_____	41/
VITAMIN C.....2	42/	_____	43-46/	1.....2.....3	47/	_____	48/
OTHER (SPECIFY)							
_____	49-50/	_____	51-54/	1.....2.....3	55/	_____	56/
_____	57-58/	_____	59-62/	1.....2.....3	63/	_____	64/
_____	65-66/	_____	67-70/	1.....2.....3	71/	_____	72/

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11a7. What sources or references were used in establishing these nutritional goals? (DO NOT READ LIST; CIRCLE ALL THAT APPLY.)

DIETARY GUIDELINES FOR AMERICANS.....	1	14/
NATIONAL RESEARCH COUNCIL GUIDELINES ("DIET AND HEALTH").....	2	15/
AMERICAN HEART ASSOCIATION GUIDELINES.....	3	16/
NATIONAL CANCER INSTITUTE GUIDELINES.....	4	17/
NATIONAL CHOLESTEROL EDUCATION PROGRAM....	1	18/
SURGEON GENERAL'S REPORT ON NUTRITION AND HEALTH.....	2	19/
AMERICAN ACADEMY OF PEDIATRICS RECOMMENDATIONS.....	3	20/
OTHER (SPECIFY)_____	6	21/
_____		22-23/
		24-25/

11a8. If given a choice, would you prefer to plan your menus using a nutrient analysis or meal pattern requirement?

NUTRIENT ANALYSIS.....	1	26/
MEAL PATTERN.....	2	
DON'T KNOW.....	8	

SKIP TO Q.11a10

11a9. **ASK Q.11a9 ONLY IF SFA DOES NOT DO NUTRITIONAL ANALYSIS OF MENUS.**

Why don't you analyze the nutrient content of your menus? (DO NOT READ LIST; CIRCLE ALL THAT APPLY.)

NOT IMPORTANT	1	27/
NOT ENOUGH TIME/STAFF TO DO SO	2	28/
IMPOSSIBLE TO MEET STANDARDS	3	29/
NO COMPUTER ACCESS	4	30/
OTHER (SPECIFY)_____	6	31/
_____		32-33/
DON'T KNOW	8	34-35/

11a10. Have you contacted manufacturers to obtain nutritional information on commercially purchased products?

YES	1	36/
NO (SKIP TO Q. 11b1)	2	
DON'T KNOW (SKIP TO Q. 11b1)	8	

11a11. For how many products is this nutritional data available? Is it (READ LIST. CIRCLE ONE ANSWER.)

Always Available on All Products	1	37/
Available For Most Products	2	
Available For a Few Products	3	
Rarely Available	4	
Other (SPECIFY)_____	6	38-39/
_____		
DON'T KNOW	8	

11a12. What types of nutritional information are typically available for commercially purchased products? (DO NOT READ LIST; CIRCLE ALL THAT APPLY.)

CALORIES	1	40/
CARBOHYDRATE	2	41/
CHOLESTEROL	3	42/
FAT - SATURATED	4	43/
FAT - UNSATURATED	1	44/
FAT - TOTAL	2	45/
IRON	3	46/
NIACIN	4	47/
PROTEIN	1	48/
RIBOFLAVIN	2	49/
SODIUM	3	50/
THIAMIN	4	51/
VITAMIN A	1	52/
VITAMIN C	2	53/
OTHER (SPECIFY)_____	6	54/
DON'T KNOW	8	55-56/
		57-58/

11B. FOOD SERVICE MANAGEMENT INSTITUTE

11b1. Are you aware of the Food Service Management Institute that was recently established at the University of Mississipi?

YES (SKIP TO Q. 11b2).....	1	59/
NO (READ EXPLANATION, BELOW).....	2	

FSMI EXPLANATION

Over the past few years, the American School Food Service Association and other food service professionals have proposed the establishment of a national food service management institute to meet a variety of needs. Congress recently authorized USDA to establish the FSMI at the University of Mississippi.

The Institute will determine the training needs of school food service practitioners and related personnel and develop appropriate training materials and resources. In addition, the Institute will establish a national network of trained professionals throughout the U.S. to present workshops and training materials developed by the Institute.

11b2. What functions do you think the FSMI should serve? (DO NOT READ LIST; CIRCLE ALL THAT APPLY.)

RESEARCH.....	1	60/
TRAINING.....	2	61/
TECHNOLOGY TRANSFER.....	3	62/
OTHER (SPECIFY)_____	6	63/
_____		64-65/
		66-67/

One of the primary functions of the FSMI will be to develop and provide standardized training for food service personnel.

I would like to read you a list of potential training programs. For each program, please tell me whether or not such training could fill a need that you or your food service personnel currently have.

Would a training program in (ITEM) fill a need you currently have?

IF YES, ASK:

11b4. Would you be more interested in receiving written materials such as manuals or curricula or in attending a workshop?

	11b3. NEED				IF YES: 11b4. DELIVERY METHOD			
	Yes	No	D.K.		Material	Workshop	D.K.	
Financial Management	1	2	8	68/	1	2	8	69/
Regulations & Guidelines	1	2	8	70/	1	2	8	71/
Quality Control & Assurance	1	2	8	72/	1	2	8	73/
Production Systems and Techniques	1	2	8	74/	1	2	8	75/
Implementing U.S. Dietary Guidelines in Child Feeding	1	2	8	76/	1	2	8	77/
Productivity	1	2	8	78/	1	2	8	79/
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Computer Systems in Food Service	1	2	8	14/	1	2	8	15/
Software Needs Assessment & Evaluation	1	2	8	16/	1	2	8	17/
Purchasing & Procurement	1	2	8	18/	1	2	8	19/
Marketing or Merchandising	1	2	8	20/	1	2	8	21/
Layout & Design	1	2	8	22/	1	2	8	23/
Equipment Selection & Maintenance	1	2	8	24/	1	2	8	25/
Nutritional & Feeding Needs of Handicapped Children	1	2	8	26/	1	2	8	27/
Citizen and Public Relations	1	2	8	28/	1	2	8	29/
Personnel Management	1	2	8	30/	1	2	8	31/
Legalities in Employee Relations	1	2	8	32/	1	2	8	33/
Small Business Principles and Practices	1	2	8	34/	1	2	8	35/
Decision Making and Management Techniques	1	2	8	36/	1	2	8	37/
Utilization of Commodities and New Food Products	1	2	8	38/	1	2	8	39/

11b5. **ASK ONLY IF RESPONDENT INDICATED AN INTEREST IN ATTENDING A WORKSHOP FOR AT LEAST ONE ITEM.**

You indicated that you might be interested in attending a training workshop. Workshops can be offered on a national, regional, State or local basis. We'd like to know which workshops you would be able to attend.

Would you be able to attend a workshop that was held...
(READ LIST; CIRCLE ONE ANSWER FOR EACH ITEM.)

	YES	NO	DK	
Nationally, that is, a one-time workshop held anywhere in the U.S.....	1	2	8	40/
Within your FNS region.....	1	2	8	41/
Within your state.....	1	2	8	42/
In your local area.....	1	2	8	43/
				44/Blank

SECONDARY RESPONDENT: _____

TITLE: _____

TELEPHONE # _____

12C. COMMERCIAL FOOD SERVICE VENDORS

The next few questions are about commercial food service vendors.

12c1. Have you or your administrators been approached by any commercial company that provides retailed, prepared, ready-to-eat foods; for example, Pizza Hut, McDonald's, or Wendy's, about setting up food service programs in any of your schools?

YES	1	45/
NO (SKIP TO Q.13a1)	2	
DON'T KNOW (SKIP TO Q.13a1)	8	

12c2. Which specific vendors have approached you or your SFA? (DO NOT READ LIST; CIRCLE ALl THAT APPLY.)

MCDONALD'S	1	46/
WENDY'S	2	47/
BURGER KING	3	48/
TACO BELL	4	49/
PIZZA HUT	1	50/
PREFERRED MEALS	2	51/
DOMINO'S PIZZA	3	52/
OTHER (SPECIFY) _____	6	53/
_____		54-55/
DON'T KNOW	8	56-57/

12c3. Are any such food service programs currently operational in your schools?

YES	1	58/
NO (SKIP TO Q.13)	2	
DON'T KNOW (SKIP TO Q.13)	8	

12c4. Did you use competitive bidding during the selection process for these vended services?

YES	1	59/
NO	2	
DON'T KNOW	8	

12c5. How many schools are involved? If possible, please provide this information seperately for elementary, middle and secondary schools.

Number of elementary schools:	_____	60-62/
Number of middle schools:	_____	63-65/
Number of secondary schools:	_____	66-68/
Total number of schools:	_____	69-72/

12c6. Please describe how these commercial food service vendors function within your schools. What do they do besides supply food? How do their services and employees interact with school food service staff and services. PROBE FOR DETAILS OF WHAT VENDOR DOES AND WHAT SCHOOLS DO IN PLANNING, PROVIDING AND CLEANING UP AFTER MEALS.

_____ 73-74/

_____ 75-76/

_____ 77-78/

_____ 79-80/

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SECONDARY RESPONDENT: _____

TITLE: _____

TELEPHONE # _____

13. AFTER-SCHOOL CARE

Now I have some questions about after-school child care.

13A. Do any of the schools in your district have an after-school child care program?

YES	1	14/
NO (SKIP TO CLOSING).....	2	
DON'T KNOW (SKIP TO CLOSING).....	8	

13a1. Who is the sponsoring organization for the after-school child care programs? (DO NOT READ LIST; CIRCLE ALL THAT APPLY.)

SCHOOL DISTRICT.....	1	15/
PRIVATE GROUP (SPECIFY)_____	2	16/
_____		17-18/
PUBLIC GROUP (SPECIFY)_____	3	19/
_____		
DON'T KNOW.....	8	20-21/

13a2. Are these programs run by the school district or are they run by outside private or public groups that utilize school district facilities? (CIRCLE ALL THAT APPLY.)

SCHOOL DISTRICT.....	1	22/
PRIVATE GROUPS (SPECIFY)_____	2	23/
_____		
PUBLIC GROUP(S) (SPECIFY)_____	3	24-25/
_____		26/
DON'T KNOW.....	8	27-28/

13a3. How many elementary schools in your district offer such programs? How many middle and secondary schools?

ELEMENTARY SCHOOLS _____		29-31/
MIDDLE/SECONDARY SCHOOLS _____		32-34/
DON'T KNOW.....	998	

13a4. How many children participate in these programs?

_____		35-39/
DON'T KNOW.....	99998	

13a5. What are the typical hours of operation for these after-school programs?

FROM___:___ p.m. TO___:___ p.m.
40-41/ 42-43/ 44-45/ 46-47/

DON'T KNOW.....8 48/

13a6. What requirements, in addition to the CACFP regulations, are required of the after-school care provider?

_____ 49-50/
_____ 51-52/
_____ 53-54/
_____ 55-56/

None (Skip to Q13a8)..... 00
DON'T KNOW (SKIP TO Q.13a8)..... 98

13a7. Are these additional requirements mandated by State or by local authorities? (CIRCLE ALL THAT APPLY.)

STATE AUTHORITIES.....	1	57/
LOCAL AUTHORITIES.....	2	58/
BOTH STATE AND LOCAL AUTHORITIES.....	3	59/
DON'T KNOW.....	8	

13a8. Do all, some or none of these programs provide snacks or suppers to participating children? (CIRCLE ONE ANSWER.)

ALL.....	1	60/
SOME	2	
NONE (SKIP TO CLOSING).....	3	
DON'T KNOW (SKIP TO CLOSING).....	8	

13a9. In those programs that do provide some food service, what is most commonly offered? That is, do most programs provide only an afternoon snacks, both a snack and a supper, or some other combination? (CIRCLE ONE ANSWER.)

SNACKS ONLY.....	1	61/
SUPPER MEAL ONLY (SKIP TO Q.13a11).....	2	62-63/
BOTH SNACKS AND SUPPER MEAL.....	3	
OTHER (SPECIFY) (SKIP TO Q.13a11)_____	6	
DON'T KNOW (SKIP TO Q.13a11).....	8	

13a10. Which food items are typically provided as afternoon snacks?

64-65/
_____ 66-67/
_____ 68-69/
_____ 70-71/
_____ 72-73/
74-75/

13a11. How is the actual food service handled in these programs? Do school food service employees prepare the food, do programs independently arrange for food to be prepared, purchased and delivered by outside vendors, or do individuals associated with the after-school program take care of their own food service needs utilizing the schools' food service facilities? (DO NOT READ LIST; CIRCLE ALL THAT APPLY.)

SFA EMPLOYEES HANDLE FOOD SERVICE.....	1	14/
PROGRAMS USE OUTSIDE VENDORS.....	2	15/
PROGRAMS USE SFA FACILITIES.....	3	16/
PROGRAMS USE OWN FACILITIES.....	4	17/
FOOD PICKED UP FROM SFA, NO PREPARATION NEEDED.....	5	18/
OTHER (SPECIFY)_____	6	19/
_____		20-21/
DON'T KNOW.....	8	22-23/

13a12. Do those programs that provide some after-school food service participate in the National School Lunch Program, the Child and Adult Care Food Program, CACFP, or do they receive no federal subsidies? (CIRCLE ALL THAT APPLY.)

NATIONAL SCHOOL LUNCH PROGRAM ONLY (SKIP TO Q.13a14).....	1	24/
NATIONAL SCHOOL LUNCH PROGRAM AND CHILD AND ADULT CARE FOOD PROGRAM (CACFP) (SKIP TO Q.13a14).....	2	25/
CHILD AND ADULT CARE FOOD PROGRAM (CACFP) ONLY (SKIP TO Q.13a14).....	3	26/
NO FEDERAL SUBSIDIES.....	4	27/
DON'T KNOW (SKIP TO Q.13a14).....	8	

ASK ONLY IF NO PROGRAMS RECEIVE FEDERAL SUBSIDIES.

13a13. Why don't the programs apply for federal subsidies for after-school child care?

_____ 28-29/
_____ 30-31/
_____ 32-33/
_____ 34-35/

13a14. Are the snacks or suppers paid for out of the School Food Service account?

YES	1	36/
NO	2	
DON'T KNOW.....	8	

13a15. Omitted 37/BLANK

13a16. Are children charged for snacks or suppers?

YES	1	38/
NO (SKIP TO CLOSING).....	2	
INCLUDED IN OTHER FEES (SKIP TO CLOSING)..	3	
DON'T KNOW (SKIP TO CLOSING).....	8	

13a17. What is the price charged for snacks? What is the price charged for suppers?

SNACK PRICE $ ___.___ 39-41/

SUPPER PRICE $ ___.___ 42-44/

CLOSING: That's the end of the interview. Thank you very much for your time.

INTERVIEWER: PRINT LAST NAME _____

DATE INTERVIEW COMPLETED _____/_____/1991

CODER: PRINT INITIALS _____

APPENDIX B
NONRESPONSE ANALYSIS

SFA MANAGER SURVEY NON-RESPONSE ANALYSIS (YEAR THREE)

An analysis of possible non-response bias was conducted to determine the extent to which SFAs which responded to the Year Three SFA Manager Survey were systematically different from non-responding SFAs. Analyses were conducted for two sets of SFAs: (1) the 1,307 SFAs contained in the longitudinal data set, and (2) the 1,244 SFAs in the cross-sectional data set. Both groups were compared to the subset of SFAs that did not respond to the 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 is presented below. Data for the analysis were obtained from State record for the 1986-87 school year (i.e., the data used to construct the sampling frame).

Longitudinal Data Set

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 means for responders and non-responders of the transformed version of enrollment indicated that there is a statistically significant difference between the two distributions. On average, the non-responding SFAs are smaller than the responding SFAs. The mean enrollment for non-responding SFAs is 1,039 vs. 2,365 for responding SFAs.

To examine this difference in more detail, Exhibit B.1 classifies SFA enrollment into five levels. Overall, the response rate to the telephone survey was 76 percent. For small SFAs--enrollment less than 1,000--the response rate was only 62 percent, while the response rate for districts with enrollment greater than 999 is 83 percent. A chi-square test on this contingency table indicated a statistically significant relationship between enrollment and response to the telephone survey ($x^2 = 92.6$, $p < .01$, $\emptyset = .24$)

Participation in SBP. An analysis comparing participation in the SBP for non-responding and responding SFAs (See Exhibit B.2) revealed that there is a statistically significant, but weak relationship between participation in SBP and response status ($x^2 = 13.3$, $\emptyset = 0.09$), such that responding SFAs are less likely to offer the SBP than non-responding SFAs.

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-priced 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 indicated that there is a statistically significant difference such that SFAs with

Exhibit B.1

Number and Percentage of Responders and Non-Responders by SFA Enrollment: Year Three SFA Manager Survey, Longitudinal Data Set

Enrollment (Number of Students)	Non-Responder		Responder		Total	
	#	%	#	%	#	%
1-999	206	38%	331	62%	537	100%
1000 - 4999	128	18	565	82	693	100
5000 - 9999	35	14	218	86	253	100
10000 - 24999	25	16	133	84	158	100
25000 or more	18	23	60	77	78	100
Total N	412	24	1,307	76	1,719	100

Data Source: Year Three SFA Manager Survey and Sampling Frame for the Study

Exhibit B.2

Number and Percentage of Responders and Non-Responders by SBP Participation: Year Three SFA Manager Survey, Longitudinal Data Set

SBP Participation	Non-Responder		Responder		Total	
	#	%	#	%	#	%
NSLP only	213	21%	810	79%	1,023	100%
NSLP + SBP	199	29	497	71	696	100
Total N	412	24	1,307	76	1,719	100

Data Source: Year Three SFA Manager Survey and Sampling Frame for the Study

a high percentage of children approved for free or reduced-price meals are less likely to respond to the survey (See Exhibit B.3).

Summary. The analyses presented here examined three characteristics of SFAs that did and did not respond to the longitudinal data items on the Year Three SFA Manager Survey. The findings are:

- Enrollment - small SFAs had lower response rates than large SFAs.
- SBP participation - SFAs offering the SBP had lower response rates than SFAs that participate only in the NSLP.
- Percent free or reduced-price - SFAs with a high percentage of children approved for free or reduce-price meals had lower response rates than SFAs with lower percentages of free or reduced-price children.

In summary, there does appear to be a response bias problem with SFAs that are included in the Year Three longitudinal data set. The sample weighting adjustments described in Appendix C work to counteract and compensate for this bias.

Cross-Sectional Data Set

Enrollment. Exhibit B.4 presents information on survey responses for different sizes of SFAs. Overall, the response rate for the mail survey was 72 percent. However, the exhibit shows that small SFAs had a lower rate (60 percent) than any other subgroup.

Participation in SBP. Exhibit B.5 presents the response rates for SFAs that participate only in the NSLP and for those SFAs that offer both the NSLP and SBP. There is a statistically significant difference in response rates for these groups ($x^2 = 10.99$, $p < .001$, $\emptyset = .08$). For SFAs that offer lunch only, the response rate was higher (75 percent) than for SFAs that offer breakfast as well as lunch, with a response rate of 68 percent.

Percent Free and Reduced-Price. Exhibit B.6 presents response rates for SFAs that have varying percentages of children approved for free or reduced-price meals. In can be seen that SFAs with a high percentage of free or reduced-price children were less likely to respond to the cross-sectional survey than other SFAs. The response rate for districts with 75 percent of more of their students approved had a response rate of 46 percent, while for all other groups the response rate was 60 percent or more.

Summary. In summary, an examination of the relationship between response rates and SFA enrollment, percent of free or reduced-price children, and SBP

Exhibit B.3

Number and Percentage of Responders and Non-Responders by Percent Free or Reduced Price: Year Three SFA Manager Survey, Longitudinal Data Set

Percent Free or Reduced-Price	Non-Responder		Responder		Total	
	#	%	#	%	#	%
0 - 9.9%	88	23%	301	77%	389	100%
10 - 24.9%	97	17	476	83	573	100
25 - 49.9%	83	20	342	80	425	100
50 - 74.9%	70	36	122	64	192	100
75% or more	74	53	66	47	140	100
Total N	412	24	1,307	76	1,719	100

Data Source: Year Three SFA Manager Survey and Sampling Frame for the Study

Exhibit B.4

Number and Percentage of Responders and Non-Responders by SFA Enrollment: Year Three SFA Manager Survey, Cross-Sectional Data Set

Enrollment (Number of Students)	Non-Responder		Responder		Total	
	#	%	#	%	#	%
1-999	216	40%	321	60%	537	100%
1000 - 4999	157	23	536	77	693	100
5000 - 9999	50	20	203	80	253	100
10000 - 24999	27	17	131	83	158	100
25000 or more	25	32	53	68	78	100
Total N	475	28	1,244	72	1,719	100

Data Source: Year Three SFA Manager Survey and Sampling Frame for the Study

Exhibit B.5

Number and Percentage of Responders and Non-Responders by SBP Participation: Year Three SFA Manager Survey, Cross-Sectional Data Set

SBP Participation	Non-Responder #	Non-Responder %	Responder #	Responder %	Total #	Total %
NSLP only	252	25%	771	75%	1,023	100%
NSLP + SBP	223	32	473	68	696	100
Total N	475	28	1,244	72	1,719	100

Data Source: Year Three SFA Manager Survey and Sampling Frame for the Study

Exhibit B.6

Number and Percentage of Responders and Non-Responders by Percent Free or Reduced Price: Year Three SFA Manager Survey, Cross-Sectional Data Set

Percent Free or Reduced-Price	Non-Responder		Responder		Total	
	#	%	#	%	#	%
0 - 9.9%	99	25%	290	75%	389	100%
10 - 24.9%	126	22	447	78	573	100
25 - 49.9%	98	23	327	77	425	100
50 - 74.9%	76	40	116	60	192	100
75% or more	76	54	64	46	140	100
Total N	475	28	1,244	72	1,719	100

Data Source: Year Three SFA Manager Survey and Sampling Frame for the Study

participation, supports the conclusion that there is a response bias problem with the cross-sectional survey. The sample weighting adjustments described in Appendix C work to counteract and compensate for this bias.

APPENDIX C
WEIGHTING METHODOLOGY

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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 longitudinal component and the cross-sectional component:

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 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 how-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 any nonresponse bias in the surveys. 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 SFAs that serve 59 percent or fewer free or reduced-price lunches vs. SFAs that serve 60 percent or more free or reduced-price lunches. 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.

LONGITUDINAL SAMPLE WEIGHTS

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.

Non-response 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 235 responding self-representing public SFAs were multiplied by 1.192, the ratio of the weighted count of total approved applicants for all 308 sample self-representing SFAs to the weighted count for the 235 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 1.136.

After this initial adjustment for non-response, the weighted count of public SFAs equalled 10,077 and the weighted count of total approved applicants equalled 10,729,795. 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 1.576 to bring the weighted count of public SFAs up to 15,715. This yielded a weighted total of approved NSLP applicants of 15,292,269.

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 few public SFAs were contributing disproportionately to the weighted count of 15,292,269 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 14,849, while the weighted count of total approved applicants declined to 14,316,078.

Non-response Adjustment: Private SFAs. The weighting methodology for private SFAs responding to the longitudinal questions followed the same steps that were used for public SFAs. They 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 249,769.

After examining the distribution 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 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 4,256 private SFAs, and a weighted count of 248,768 approved applicants.

Meal Count Post-Stratification. An important analytical component of the study is the estimation of total meal counts for key domains of the SFA universe. The weighted count of free lunches, reduce-price lunches and paid lunches as reported on the SFA longitudinal 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: 9.5 % for free lunches, 22.4% for reduced lunches, and 41.4% 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 26.9% the difference varied significantly by SFA poverty status. For SFAs that serve 59 percent or fewer free or reduced-price lunches, the difference was 44.3%. On the other hand, for SFAs that serve 60 percent or more free or reduced-price lunches, the difference was 8.9%. The under-representation of lunches in SFAs that serve 60 percent or more free or reduced-priced lunches was caused by a lower response rate among this class of SFAs. Fortunately, FNS secondary data reports total lunches for both types of SFAs for SY 1989-90:

	Total Lunches
0 - 59% F&R	2,694,931,840
60% or more F&R	1,312,534,734
Total	4,007,466,574

The longitudinal sample SFA weights for both types of SFAs were separately ratio-adjusted to equal the FNS universe counts. After this adjustment the weighted count of free, reduced-price and paid lunches were within 4% or less of the FNS universe counts. This final weight adjustment lowered the weighted count of total SFAs to 14,158. Weighted counts for key domains are shown in Exhibit I.3.

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 SFA weights for all SFAs that offer the SBP were therefore ratio-adjusted to equal the FNS count of 705,799,090 breakfasts. This separate set of weights was used only for those analyses involving SFAs that offer the SBP.

CROSS-SECTIONAL SAMPLE WEIGHTS

The cross-sectional sample consists of those SFAs that answered the questions included for the first time in the Year Two survey. The steps in the weighting methodology were exactly the same as for the longitudinal sample; however, no meal count post-stratification was carried out. Rather, the weighted count of total approved applicants in the cross-sectional sample was ratio-adjusted to agree with the weighted count of total approved applicants in the longitudinal sample. Because the ratio-adjustment used total approved applicants, the weighted number of SFAs in the cross-sectional sample does not agree exactly with the weighted count of SFAs in the cross-sectional sample.