

**EVALUATION OF THE
NUTRIENT
STANDARD MENU
PLANNING
DEMONSTRATION**

**Findings from the
Formative
Evaluation**

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EXECUTIVE SUMMARY

This report presents formative evaluation findings from the ongoing Evaluation of the Nutrient Standard Menu Planning (NSMP) Demonstration. Data were collected primarily from directors of School Food Authorities (SFAs) participating in the demonstration; brief interviews were also conducted with directors of Child Nutrition (CN) programs in cognizant States.

The NSMP Demonstration began in January, 1994, with the selection of 35 SFAs. One SFA dropped out of the demonstration immediately, due to lack of school board approval. Key staff from each of the remaining 34 SFAs received training from USDA in June, 1994. SFAs were expected to begin implementing NSMP during SY 1994-95 and to be fully operational, with NSMP menus implemented in *all schools* in the district, by the Spring of 1996.

SFA directors were interviewed in October-November, 1995 and February, 1996 to obtain information on implementation status as well as on barriers to NSMP and perceived strengths and weaknesses of the system. Directors of cognizant State CN offices were also interviewed in October-November, 1995. Major findings from these interviews are summarized in this report.

Implementation

As of early February, 1996, only seven of the 34 demonstration SFAs had implemented NSMP in all schools. Ten districts were partially implemented, with NSMP menus being used for breakfast (if offered) and/or lunch in some schools. Nine SFAs were still in the process of collecting and entering data, planning menus, and/or analyzing menus, and had not yet implemented NSMP in any schools. The remaining eight SFAs had withdrawn from the demonstration because of concerns about the use of weighted nutrient analysis, problems with NSMP software, and/or concerns about staff resources required to implement NSMP.

Preliminary evidence suggests that SFAs most likely to experience difficulty in implementing NSMP are very large SFAs located in urban areas and serving largely low-income populations. SFAs that do not have a registered dietitian on staff are also more likely to experience difficulties.

NSMP Software

In February 1996, just over one-half of the SFAs still participating in the demonstration were using the *Nutrikids* software package. Roughly one-quarter were using *School Nutrition Accountability Program (SNAP)* software and about one-eighth were using the *Computer-Assisted Food Service (CAFS)* system. Three SFAs were using software systems that had not yet been approved by USDA.¹

¹Eleven other software systems have been approved by USDA since the time these data were collected, including the *Computrition* system which is being used by one of the demonstration SFAs.

SFA staff were generally happy with the NSMP system they were using. Ninety percent rated their NSMP software as either very easy or easy to use. More than 80 percent rated their NSMP software as either exceptional or satisfactory with regard to time efficiency.

Menu Changes

Among SFAs that were far enough along in the implementation process to have made menu modifications, the changes reported most frequently were increased use of fresh fruits and vegetables and increased use of lower-fat products. Some SFAs reported adding foods high in carbohydrate to elementary school menus and/or increasing portion sizes in middle and high school menus in order to meet standards for calories.

Meeting Nutrient Standards

Most SFAs reported difficulty meeting the calorie standard for both breakfast and lunch menus (i.e., menus planned for one or more age groups were *low* in calories). In addition, more than one-half of SFAs reported having problems meeting fat and saturated fat standards at lunch.

Perceived Burden of NSMP Implementation Tasks

A majority of SFA directors reported that implementing NSMP imposed a minor or significant burden on SFA staff and resources. Tasks associated with collecting and entering data were viewed as most burdensome. Planning menus, monitoring purchased foods, developing purchasing specifications, and marketing healthful meals to students were perceived as less burdensome tasks.

SFA Directors' Opinions About NSMP

A majority of SFA directors reported feeling very positive or somewhat positive about NSMP. SFA directors who reported feeling only *somewhat* positive about NSMP were generally supportive of the goal of NSMP but were having difficulty with some aspect of implementation.

Positive aspects of NSMP identified by SFA directors include the fact that NSMP provides an accurate assessment of the nutrient content of meals offered; that NSMP provides assurance that meals offered are healthful; and that NSMP provides increased flexibility in menu planning. Negative aspects of NSMP include the time and labor required to implement the system and the use of weighted nutrient analysis.

Perceptions and Attitudes of Key Stakeholders

Directors in a majority of demonstration SFAs reported that district financial staff and school food service staff have very positive or somewhat positive attitudes toward NSMP. Moreover, most directors believe that implementation of NSMP has had a positive impact on

how parents and teachers feel about school food service. Few SFA directors reported changes in students' attitudes since the implementation of NSMP; however, at the time interviews were conducted, many SFAs had not yet mounted information campaigns directed at students.

SFA Directors' Opinions About the NSMP Demonstration

More than one-half of the SFA directors still participating in the demonstration indicated that they had no regrets about volunteering to participate. Among those who did report regrets, the primary source of concern was the staff time required to implement NSMP.

Despite the reservations voiced by some SFA directors, *100 percent* of directors indicated that they would continue with NSMP even if given the opportunity to return to the old menu planning system. About one-third would continue with the current NSMP protocol. The remaining two-thirds would change one or more aspects of the existing protocol; most would eliminate use of weighted nutrient analysis.

State Directors' Experiences and Opinions

Demonstration SFAs are located in 19 different States. While almost two-thirds of the cognizant State directors had made telephone contact with their NSMP demonstration site(s) by the time the formative evaluation interviews were conducted, fewer than half had actually visited the district(s).

A common concern voiced by State directors who had visited a demonstration site was that SFAs would not be able to meet the labor requirements associated with NSMP implementation. Other concerns included the need for additional staff training and the need for improved maintenance of food production records.

Although State directors indicated that they are generally supportive of the goal of NSMP, many had reservations about the ability of SFAs to successfully implement the program. Most State directors did not expect a substantial number of SFAs to elect NuMenus in the upcoming school year. Reasons cited for potential SFA resistance to NuMenus included fear of change; concerns about labor requirements; and fear of/lack of familiarity with technology and computers.

Chapter 1

INTRODUCTION

This report summarizes data collected as part of the formative evaluation of the Nutrient Standard Menu Planning (NSMP) Demonstration. Data were collected primarily from directors of School Food Authorities (SFAs) participating in the demonstration. Brief interviews were also completed with State Agency directors in cognizant States.

This chapter provides an overview of the NSMP Demonstration and the associated evaluation. The second chapter summarizes the status of NSMP implementation in demonstration SFAs as of February, 1996 and examines characteristics of SFAs in varying stages of implementation. SFA directors' perceptions about the relative burden associated with NSMP implementation are also discussed. The third and final chapter provides a synopsis of opinions about NSMP in general and the demonstration in particular. Opinions of SFA directors and State agency directors are featured, along with SFA directors' assessments of the opinions of key stakeholders (e.g., food service staff, district financial staff, teachers, parents and students). The chapter concludes with a discussion of recommendations and suggestions offered by SFA directors for improving NSMP and/or the demonstration.

The NSMP Demonstration

The NSMP Demonstration was initiated by the U.S. Department of Agriculture (USDA) in 1993. The purpose of the demonstration is to examine NSMP as an alternative approach to planning menus in school-based Child Nutrition (CN) programs. Under the NSMP (now known as NuMenus) system, menus are planned using specialized nutrient analysis software rather than traditional program meal patterns which specify both the types and quantities of food to be included in each meal. Menus are required to meet specific nutrient standards (one-third of the Recommended Dietary Allowances (RDAs) for lunches and one-quarter for breakfasts) for food energy, protein, vitamin A, vitamin C, iron, and calcium. Menus must also satisfy *Dietary Guidelines for Americans* standards for percent of calories from fat (30 percent or less) and saturated fat (less than 10 percent). The NSMP system also calculates sodium, cholesterol, dietary fiber, and carbohydrate content and, while no specific standards have been established for these nutrients, SFAs are encouraged to monitor them.

To support NSMP, USDA developed the National Nutrient Database for Child Nutrition Programs (NND-CNP). The database includes nutrient information from USDA's standard nutrient data base for foods routinely used in school food service. Initially, USDA planned to augment the main data base with nutrient information for an extensive number of commercially-prepared food items. USDA staff requested nutrition information, in a specified format, from major food manufacturers servicing the school food service industry. Information supplied by manufacturers was to be reviewed by USDA staff and entered into the NND-CNP. As discussed later in this report, however, the food service industry was slow in responding to this request.

In addition to the specialized nutrient data base, USDA developed detailed

specifications for companion nutrient analysis software. The Agency published the specifications and invited companies to develop software which met the performance and functional criteria. Once developed, software systems were submitted to USDA for review and approval. Approved software systems could be used by any NSMP site or any school district interested in implementing NSMP.

In the summer of 1993, USDA invited SFAs to volunteer for the NSMP demonstration. Thirty-five SFAs were selected in January, 1994 from a pool of 127 applicants. SFAs were selected to provide diversity in geographic location, size, CN program participation, student participation rates, characteristics of food service programs, and staff experience with computerized nutrient analysis. One of the 35 SFAs dropped out shortly after selection because school board approval for the project was not obtained. The district was not replaced. Thus, the demonstration began with a slate of 34 SFAs.

The demonstration spans three school years, from SY 1994-95 through SY 1996-97. Key staff from participating SFAs attended a training session in June, 1994. NSMP implementation was expected to begin during SY 1994-95 and to be fully operational, with NSMP menus implemented in *all schools* in the district, by the Spring of 1996.

The Evaluation of the Demonstration

The evaluation design includes both formative and summative evaluation components. The summative evaluation includes comparison of baseline and posttest measures of nutrient content, meal costs, student participation, plate waste, and characteristics of food service operations, as well as an assessment of the acceptability of NSMP to both district and school-level food service staff. Baseline data were collected in the Spring of 1994, before SFA staff received any training in NSMP. Some posttest data were collected in the Spring of 1996 in SFAs that had actually implemented NSMP in elementary, middle, and/or high schools. Additional posttest data will be collected in the Spring of 1997.

The formative evaluation, which this document addresses, was intended to provide the Agency with information about difficulties encountered by demonstration SFAs during the implementation process; SFAs' need for clarification and/or guidance; and the potential need for modifications or adjustments in the implementation protocol. The original timeline called for the formative evaluation to be completed in April, 1995, at which point SFAs were expected to be well on their way to implementing NSMP. Unfortunately, a substantial delay in the approval of NSMP software impeded significantly the progress SFAs were able to make during the first year of the demonstration. (This issue is discussed in more detail in Chapter Two.) As a result, few SFAs had a substantial amount of experience with NSMP by April of 1995, making it impractical to conduct the formative evaluation at that time. Instead, SFA Directors were interviewed briefly to obtain basic information on the software systems being used, the amount of implementation work completed to date, major obstacles encountered, and general opinions about NSMP. This information was shared with USDA staff.

Detailed formative evaluation interviews were completed with SFA directors and cognizant State CN directors approximately six months after the originally scheduled date, in October-November, 1995. Information on the status of NSMP implementation was updated in February, 1996. Findings from these interviews are discussed in the next two chapters.

Chapter 2

STATUS OF NSMP IMPLEMENTATION IN DEMONSTRATION SFAS

From the outset, NSMP implementation in all SFAs has been complicated by a number of factors. Most important was a significant delay in the approval of NSMP software systems and an associated delay in start-up activities in most SFAs. SFA staff were trained in June, 1994. They were unable to begin work for some time afterward, however, because no approved software systems were available. Software vendors were slow in submitting products for USDA review and approval, and many of the programs submitted did not satisfy the established functional criteria.

By January, 1995, six months after SFAs were trained, only two NSMP software packages had been approved. At that time, USDA contacted all demonstration SFAs and asked that they select one of the two available systems and make a concerted effort to move forward with NSMP implementation during the remainder of SY 1994-95. Several SFAs lobbied for approval of other software systems, and a third package was ultimately approved.²

While all but three of the demonstration SFAs eventually complied with USDA's request and selected one of the three approved software systems, many SFAs did not really begin working with NSMP software until well into the latter half of SY 1994-95 or the subsequent summer months. This delayed start-up had a substantial impact on the progress SFAs were able to make during the first year of the demonstration.

Another problem that complicated implementation was the poor response USDA received from food manufacturers contacted to supply nutrient information for the NND-CNP. Very few manufacturers responded to the request, and much of the data submitted was found to be incomplete, inaccurate, or otherwise questionable. As a result, the NND-CNP included in the approved software systems *did not* include many of the commercially-purchased products used in school food service. This situation placed an unanticipated burden on each demonstration SFA. SFA staff had to assume responsibility for obtaining nutrient information for nationally-available commercial products and for entering this data into their copy of the NND-CNP. This requirement substantially increased labor requirements for start-up activities which, in most districts, contributed to a protracted implementation period.

Status of NSMP Implementation in Early February, 1996

In view of the complications described above, it is not surprising that, by early February, 1996, only seven of the original 34 SFAs, approximately one in five, had implemented NSMP fully in all schools (i.e., had implemented NSMP menus for both breakfast (if offered) and lunch in *all* schools) (Exhibit 1).

Ten other SFAs (29 percent) had implemented NSMP partially. Most of these SFAs had implemented NSMP for elementary school menus (lunch and/or breakfast) but had not yet completed planning and analysis of middle and secondary school menus. Some SFAs

²Since January, 1995, eleven other software systems have been approved.

were still building data bases for middle and high school menus, i.e., collecting and entering nutrition information and/or district-wide production information. Also included in the "partially-implemented" group are SFAs that deviated in

Exhibit 1

IMPLEMENTATION STATUS OF NSMP DEMONSTRATION
SFAs AS OF FEBRUARY, 1996

IMPLEMENTATION STATUS	NUMBER (PERCENT) OF SFAs (n = 34)	
Fully Implemented¹	7	(21)
Partially Implemented	10	(29)
Lunch menus implemented in elementary, middle and high schools, but analysis done with unapproved software. ²	1	(3)
Lunch and breakfast (if offered) menus implemented in elementary schools. Still planning/analyzing menus for middle and high schools. ³	3	(9)
Lunch and breakfast (if offered) menus implemented in elementary schools. Still gathering and entering data for middle and high school menus.	2	(6)
Breakfast menus implemented at all levels. Lunch menus implemented in elementary schools. Still planning/analyzing lunch menus for middle and high schools.	1	(3)
Breakfast menus implemented at all levels. Still planning and analyzing lunch menus for all levels.	1	(3)
Breakfast and lunch menus implemented in a subset of 21 (out of 84) schools.	1	(3)
Breakfast and lunch menus for one week, plus selected days throughout cycle, implemented at all levels. Still gathering and entering data for remainder of cycle.	1	(3)
Not Yet Implemented	9	(26)
Still planning and analyzing lunch and breakfast (if offered) menus for all levels.	4	(12)
Still planning and analyzing elementary lunch and breakfast menus. Still gathering/entering data for middle and high schools.	1	(3)
Still planning and analyzing elementary lunch menus. Still gathering/entering data for middle and high school lunch and for breakfast at all levels.	1	(3)
Still gathering and entering data (or just ready to begin planning and analyzing menus) for all levels, all meals. ⁴	3	(9)
Dropped Out	8	(24)

¹ Both lunch and breakfast (if offered) menus implemented in elementary, middle, and high school.

² SFA is using Computrition software (not approved at the time). Staff adjusted nutrient analysis by hand to reflect weights. SFA does not serve reimbursable breakfast.

³ One SFA is using Practorcare software (not approved). Menus are not fully weighted, but have been adjusted using historical information on food purchases, student preferences, etc.

⁴ One SFA is using Practorcare software (not approved); waiting for USDA approval before beginning

implementation.

Source: SFA director interviews (February, 1996).

some way from the NSMP protocol. For example, one SFA had implemented NSMP in a subset of schools rather than all schools in the district. Two other SFAs had implemented nutrient-based menus in all or some schools, but were using software which had not received USDA approval. In addition to the use of a different nutrient data base, unapproved software systems do not perform weighted nutrient analysis. Staff in these SFAs attempted to emulate the weighting function of NSMP software by adjusting the results of traditional nutrient analyses either by hand or by using companion spreadsheets.

Nine SFAs, approximately one-quarter of the original thirty-four demonstration SFAs, had not yet implemented NSMP in any schools. Six of these SFAs had gotten to the point of planning and analyzing menus but had not actually implemented new menus in any schools. The remaining three SFAs had not begun any nutrient analysis.

Eight SFAs (24 percent) dropped out of the demonstration prior to February, 1996. One SFA withdrew because there had been a change in SFA directors; the new director did not feel he could devote the necessary time or resources to NSMP. The other seven SFAs withdrew intentionally. Directors in all but one of these SFAs cited concerns about the use of weighted nutrient analysis as a reason for withdrawal. With the exception of one director, whose SFA had a fully networked information system, directors were concerned about the amount of staff labor involved in maintaining the production records required under NSMP. Most were also concerned that weighted nutrient analysis would limit flexibility in menu planning and decrease the ability of individual schools to cater to students' preferences. About half of the directors were specifically concerned that, in order to meet nutrient standards, popular, high-fat food items would have to be eliminated or offered much less frequently and that these changes would have a negative impact on lunch participation in middle and high schools.

Problems with NSMP software played a major role in the withdrawal of five SFAs. Two SFAs terminated because the director did not want to use nutrient analysis software that was incompatible with software the district was already using for other program operations. One SFA could not afford the hardware upgrade required to run NSMP software at the same time as other routinely-used software packages. Directors in the remaining two SFAs were frustrated by the numerous problems staff had experienced in working with one of the approved NSMP software systems.

A final reason for withdrawal, which influenced the decision in five SFAs, was the implementation timeline. Specifically, SFA directors were unhappy that they were expected to implement NSMP fully by the Spring of 1996 despite the lengthy delay in the software approval process. SFA directors reported that they could not dedicate the amount of staff labor that would be required to implement NSMP within the condensed timeline.

NSMP Implementation in Different Types of SFAs

At this point in the evaluation, it is instructive to examine how implementation status varies across a range of SFA characteristics as a means of identifying characteristics which may influence, either positively or negatively, the likelihood that an SFA will be successful in implementing NSMP. However, the small sample, external influences (e.g., delays in software approval and complications with the NND-CNP data base), and the fact that most SFAs are still in the early stages of implementation dictate that findings from this analysis be interpreted cautiously. Trends noted in this analysis should be interpreted as merely *suggestive* of potential relationships between SFA characteristics and the likelihood of

successful NSMP implementation. Patterns noted at this stage will be examined in the final analysis to see if they hold up over time.

With this caveat in mind, the data displayed in Exhibit 2 reveal some interesting patterns. Overall, the data suggest that the SFAs most likely to experience difficulty in implementing NSMP include SFAs located in urban areas, very large SFAs (total enrollment of 25,000 or more), SFAs that serve largely low-income populations, and SFAs that do not have a registered dietitian on staff.

As of February, 1996, the proportion of urban SFAs that had not successfully implemented NSMP (SFAs in the "not yet implemented" and "dropped out" categories) was substantially higher than that noted for suburban and rural SFAs (78 percent vs. 37 and 44 percent, respectively). A similar pattern was noted for SFA size. The proportion of very large SFAs, those with total enrollments of 25,000 or more students, that had not at least partially implemented NSMP was notably higher than for SFAs of other sizes (77 percent vs. 38 to 50 percent).

Implementation status also differed dramatically for SFAs located in lower-income areas. Eleven of 14 (78 percent) SFAs in which more than 50 percent of lunches are served free of charge had either not implemented NSMP or had dropped out of the demonstration. In contrast, only 30 percent of more affluent SFAs, those in which 50 percent or less of all lunches are served free, fell into these categories.

Finally, implementation status differed, although less strikingly, among SFAs that did and did not have a registered dietitian on staff, either as the SFA director or NSMP coordinator. Sixty-four percent of SFAs without dietitians fell into the "not yet implemented" or "dropped out" categories, compared to 43 percent of SFAs with dietitians.

No discernable pattern was detected for several other SFA characteristics, namely, average daily participation, prior experience with computerized nutrient analysis, SFA director experience, use of cycle menus before NSMP, or prevalence of standardized recipes before NSMP. Other variables examined, but not included in the exhibit, were the level of centralization in menu planning and food preparation (before NSMP) and the complexity of baseline food service operations, e.g., number of items offered, use of specialty bars, use of self-serve foods, etc. Some of these characteristics are factors which one might expect to influence NSMP implementation. The fact that a relationship is not apparent at this point does not mean that these characteristics are not influential. It is quite possible that these, or other SFA characteristics, may influence implementation during the latter stages of the demonstration, as more SFAs attempt to move toward full implementation.

Perceived Burden of NSMP Implementation Tasks

Directors of all SFAs still active in the demonstration were asked to rate the relative burden of 11 specific tasks associated with NSMP implementation (Exhibit 3). The results indicate that, at the time formative evaluation data were collected (October-November, 1995), the majority of SFA directors believed that several NSMP implementation tasks were imposing some burden on SFA staff and resources. Of the 11 tasks discussed, all but three were rated as either a minor burden or a significant burden by more than half of the demonstration SFA directors.

The tasks viewed as most burdensome were those associated with collecting and entering data -- tasks that SFA staff would presumably not have to deal with in the absence of NSMP. Entering and analyzing recipes and obtaining food production information for weighted nutrient analysis were perceived as the most burdensome tasks; 58 percent of SFA directors indicated that these tasks imposed a significant burden on the SFA. Tasks perceived as least burdensome were those that would be required under any menu planning system including planning menus, monitoring purchased foods, developing purchasing specifications, and marketing healthful meals to students.

Exhibit 2
CHARACTERISTICS OF NSMP DEMONSTRATION SFAS
BY IMPLEMENTATION STATUS

CHARACTERISTIC	IMPLEMENTATION STATUS									
	FULLY IMPLEMENTED (n = 7)		PARTIALLY IMPLEMENTED (n = 10)		NOT YET IMPLEMENTED (n = 9)		DROPPED OUT (n = 8)		ALL SFAS (n = 34)	
	n	%	n	%	n	%	n	%	n	%
FCS Region										
MARO	1	(25)	2	(50)	1	(25)	0	(0)	4	(100)
MPRO	1	(25)	2	(50)	0	(0)	1	(25)	4	(100)
MWRO	0	(0)	2	(40)	3	(60)	0	(0)	5	(100)
NERO	2	(40)	2	(40)	0	(0)	1	(20)	5	(100)
SERO	0	(0)	0	(0)	1	(20)	4	(80)	5	(100)
SWRO	1	(17)	2	(33)	2	(33)	1	(17)	6	(100)
WRO	2	(40)	0	(0)	2	(40)	1	(20)	5	(100)
Community Type										
Urban	0	(0)	2	(22)	5	(56)	2	(22)	9	(100)
Suburban	4	(25)	6	(38)	1	(6)	5	(31)	16	(100)
Rural	3	(33)	2	(22)	3	(33)	1	(11)	9	(100)
Enrollment										
Under 2,500	1	(17)	2	(33)	1	(17)	2	(33)	6	(100)
2,500-9,999	3	(33)	2	(22)	3	(33)	1	(11)	9	(100)
10,000-24,999	3	(38)	2	(25)	2	(25)	1	(12)	8	(100)
25,000 or more	0	(0)	4	(36)	3	(27)	4	(36)	11	(100)
Mean	12,723		26,626		27,079		33,383		25,160	
Mean Average Daily NSLP Participation										
40 percent or less	2	(29)	2	(29)	0	(0)	3	(43)	7	(100)
41-55 percent	2	(22)	2	(22)	4	(44)	1	(11)	9	(100)
56-70 percent	2	(15)	4	(31)	4	(31)	3	(23)	13	(100)
71 percent or more	1	(25)	1	(25)	1	(25)	1	(25)	4	(100)
Missing ¹	0	(0)	1	(100)	0	(0)	0	(0)	1	(100)
Mean	53%		54%		56%		51%		54%	
Percent of Lunches Served Free										
25 percent or less	4	(40)	2	(20)	1	(10)	3	(30)	10	(100)
26-50 percent	2	(20)	6	(60)	1	(10)	1	(10)	10	(100)
51-74 percent	0	(0)	1	(12)	5	(62)	2	(25)	8	(100)
75 percent or more	1	(17)	1	(17)	2	(33)	2	(33)	6	(100)
Mean	31%		38%		59%		49%		44%	

Exhibit 2

Computer Expertise										
SFA had prior experience with computerized nutrient analysis										
Yes	4	(20)	7	(35)	5	(25)	4	(20)	20	(100)
No	3	(21)	3	(21)	4	(29)	4	(29)	14	(100)
NSMP Coordinator had prior experience with computerized nutrient analysis										
Yes	1	(12)	3	(38)	2	(25)	2	(25)	8	(100)
No	6	(23)	7	(27)	7	(27)	6	(23)	26	(100)
Nutrition/Food Service Experience										
SFA director or NSMP Coordinator is registered dietitian (R.D.)										
Yes	6	(26)	7	(30)	4	(17)	6	(26)	23	(100)
No	1	(9)	3	(27)	5	(45)	2	(18)	11	(100)
SFA directors' total food service experience (mean years)	16		15		14		14		15	
SFA directors' experience as director (mean years)	10		7		8		9		8	
Use of Cycle Menu Prior to NSMP										
Yes	3	(18)	5	(29)	6	(35)	3	(18)	17	(100)
No	4	(24)	5	(29)	3	(18)	5	(29)	17	(100)
Prevalence of Standardized Recipes Prior to NSMP										
All or most	4	(44)	2	(22)	3	(33)	N/A	N/A	9	(100)
Some	3	(27)	3	(27)	5	(45)	N/A	N/A	11	(100)
Few or none	1	(17)	4	(67)	1	(17)	N/A	N/A	6	(100)

‡Information on meal counts not provided.

N/A: Information not available.

Source: NSMP Demonstration application forms (Fall, 1993) and SFA director interviews (November-October, 1995 and February, 1996).

Exhibit 3

SFA DIRECTORS' PERCEPTIONS ABOUT RELATIVE BURDEN OF NSMP TASKS

NSMP TASKS	SIGNIFICANT BURDEN		MINOR BURDEN		NOT A BURDEN	
	NUMBER (PERCENT) OF SFAs (n = 26)					
Entering/analyzing recipes	15	(58)	7	(27)	4	(15)
Entering/analyzing menus	14	(54)	8	(31)	4	(15)
Obtaining nutrient data for foods not in the database	11	(42)	9	(35)	6	(23)
Obtaining food production information for weighted analysis	15	(58)	3	(12)	8	(31)
Entering nutrient data for foods not in the data base	13	(50)	4	(15)	9	(35)
Developing standardized recipes	11	(42)	6	(23)	9	(35)
Training food service staff	12	(46)	4	(15)	10	(38)
Planning menus	5	(19)	10	(38)	11	(42)
Monitoring purchased foods to ensure that specifications are met	3	(12)	10	(38)	13	(50)
Developing/modifying specifications for purchased foods	3	(12)	9	(35)	14	(54)
Marketing healthier choices to students	4	(15)	6	(23)	16	(62)

Source: SFA director interviews (October-November, 1995).

As mentioned in the introduction to this chapter, USDA experienced major difficulties in obtaining nutrition information for nationally-available commercial food products to include in the NND-CNP. Consequently, the task of obtaining this information fell to individual SFAs. USDA provided districts with guidelines for requesting information from manufacturers, including specifications for the data to be submitted. Unfortunately, in the initial stages of the demonstration, individual SFAs were no more successful in acquiring the necessary information than USDA headquarters had been. In fact, a principal finding from telephone interviews completed with demonstration SFAs in April, 1995 was that SFAs were having great difficulty with this task. Many manufacturers were unable or unwilling to provide the information and, when information was obtained, it was often incomplete.

In response to this early feedback from demonstration SFAs, USDA launched a concerted effort to communicate with industry representatives and convey the importance of their participation in this endeavor. Moreover, data reporting requirements were simplified to more closely match nutrient information summaries routinely prepared by manufacturers. For example, requirements to report moisture and ash were dropped and a decision was made to accept nutrient information prepared for/displayed on package labels.

Results of the formative evaluation suggest that these changes have had a positive impact on the ability of SFAs to obtain nutrition information for commercially-prepared foods. While most SFAs still consider this task to be burdensome (Exhibit 3), the information appears to be readily available (Exhibit 4). By and large, SFAs that had worked seriously on this task by the time the formative evaluation interviews were completed had little difficulty obtaining nutrition information for commercially-prepared foods. The difficulties that were reported were very idiosyncratic (i.e., small or rural SFAs didn't seem to be having any more difficulty than large, urban districts) and were generally associated with locally-produced products. For example, SFAs who reported difficulty obtaining nutrition information for baked goods were most often dealing with local wholesale bakeries that were unable to provide the information.

SFAs have encountered problems with missing information for specific nutrients or food components (Exhibit 5), most notably saturated fat. More than a third of the SFA directors indicated that information on saturated fat content was missing for some products.

NSMP Software Systems

As discussed in the introduction to this chapter, at the time SFAs were encouraged to select a software system, three systems had been approved by USDA for use in the NSMP demonstration. The three systems were: *SNAP* (School Nutrition Accountability Program); *CAFS* (Computer-Assisted Food Service); and *NUTRIKIDS* (developed and marketed by LunchByte Systems, Inc.). By the time formative evaluation interviews were conducted, in (October-November, 1995), a fourth system, *Lunch Box* (developed and marketed by Horizon Software) had been approved.³ In late 1995, more than half of the demonstration SFAs were using the *NUTRIKIDS* system (Exhibit 6). Only six SFAs (23 percent) were using *SNAP* and three SFAs (12 percent) were using *CAFS*. The remaining three SFAs were using software

³To date, ten other software systems (eight of which incorporate the *NUTRIKIDS* software, under special licensing agreements) have been approved. Since none of these systems was available prior to the time formative evaluation interviews were conducted, they are not included in this discussion.

systems that had not received USDA approval.⁴ Reasons for software selection are summarized

⁴One of these systems, *Computrition*, has since received USDA approval (June 20, 1996).

Exhibit 4**REPORTED LEVEL OF DIFFICULTY EXPERIENCED IN
OBTAINING NUTRITION INFORMATION FROM VENDORS**

PRODUCT	VERY EASY	EASY	DIFFICULT	VERY DIFFICULT	CAN'T SAY YET	N/A
	PERCENT OF SFAS (n = 26)					
Baked breads and rolls	35	39	15	0	12	0
Baked desserts	19	19	19	4	12	27
Dairy products	35	46	4	4	12	0
Pizza	39	50	12	0	0	0
Processed chicken products	31	42	23	0	4	0
Processed meat products	23	50	27	0	0	0
Processed fish products	27	42	31	0	0	0
Mixed dishes/ethnic foods	23	27	27	4	15	4
Frozen desserts	19	31	19	8	15	8
Snack foods	31	31	19	4	0	15

N/A: Not applicable. SFA does not offer or purchase the food or product.

SOURCE: SFA director interviews (October-November, 1995).

Exhibit 5**NUTRIENTS MOST OFTEN MISSING FROM VENDOR INFORMATION**

NUTRIENT	NUMBER (PERCENT) OF SFAS (n = 23)¹
Saturated fat	9 (39)
Fiber	3 (13)
Iron	3 (13)
Vitamin A	3 (13)
Calcium	2 (9)
Vitamin C	1 (4)

¹Includes only SFAs that had made some effort to collect information from vendors.

SOURCE: SFA director interviews (October-November, 1995).

Exhibit 6

SOFTWARE SYSTEMS USED BY NSMP DEMONSTRATION SFAS

SOFTWARE SYSTEMS	NUMBER (PERCENT) OF SFAS (n = 26)	
USDA Approved		
NUTRIKIDS	14	(54)
SNAP	6	(23)
CAFS	3	(12)
Not Approved		
Practorcare	2	(8)
Computrition ¹	1	(4)

¹Computrition received USDA approval in June, 1996. The version of the software in use at the time the formative evaluation interview was conducted, however, was *not* approved NSMP software.

SOURCE: SFA director interviews (October-November, 1995).

in Exhibit 7. Most *SNAP* sites began working with *SNAP* when it was the only NSMP software available. *SNAP* was used in the training USDA provided for demonstration sites in June, 1994.⁵ All SFAs received a test copy of the program to use in continuing to gain familiarity with the basics of NSMP, but were encouraged to investigate other software systems as they became available. As previously discussed, however, it was quite a while before alternative programs were approved. Consequently, many of the SFAs that got an early start on implementation stayed with the *SNAP* system. Not surprisingly, the proportion of *SNAP* sites that is fully implemented is substantially higher than *NUTRIKIDS* sites (67 percent vs. 21 percent; data not shown).⁶

Two of the three SFAs using the *CAFS* system chose it because they owned the original *CAFS* food service management system and simply purchased the NSMP software as an enhancement. The one SFA that elected to purchase *CAFS* did so because of the system's other features, i.e., modules that support a variety of food service administration and operations tasks. The three SFAs using unapproved software had been using these systems prior to the NSMP demonstration and were reluctant to switch to another system.

In most SFAs, directors are assuming hands-on responsibility for use of the NSMP software (Exhibit 8), although clerks or interns have often been used to enter nutrition information into the data base and to summarize food production information. Directors of very large SFAs (25,000 or more students) as well as a few of the large SFAs (10,000 - 24,999 students) have delegated day-to-day responsibility for NSMP implementation to a staff nutritionist or a programmer/data clerk.

SFA staff appear to be taking appropriate advantage of tutorials, training, and technical assistance opportunities provided by software vendors (Exhibit 9), although the proportion of *SNAP* sites that received training (either in person or over the phone) is noticeably lower than the proportion of *NUTRIKIDS* or *CAFS* sites. It is not clear whether this is due to personal choice of SFA staff or because the service is not readily available. The vast majority of SFAs have made one or more technical assistance calls to their software vendor (91 percent overall). In general, SFA staff appear to be reasonably happy with the training and technical support provided by software purveyors. *NUTRIKIDS* users were noticeably less satisfied with built-in program tutorials than with personal training or technical assistance.

Overall, SFA directors and/or data managers (the term used to refer to other SFA staff with day-to-day responsibility for use of NSMP software) using approved NSMP software are happy with the system they are using (Exhibit 10). Eighty-seven percent rated their NSMP software as either very easy or easy to use. Approximately 83 percent found the software to be either exceptional or satisfactory in terms of time efficiency.

Two of the SFAs using the *SNAP* system were noticeably less satisfied with it than the other four SFAs using that system. The major problem reported by these SFAs is that the program requires too much duplicative effort and doesn't provide some of the useful, time-saving functions available in other

⁵The software developer won a competitive contract to develop a generic software package for use in the training.

⁶It should be noted that several SFAs that started out with *SNAP* ultimately switched to *NUTRIKIDS* because they found it easier to use and more time efficient. This is true, in fact, for all three of the *NUTRIKIDS* sites that are fully implemented.

Exhibit 7

PRIMARY REASON FOR SOFTWARE SELECTION

PRIMARY REASON	NUTRIKID S (n = 14)		SNAP (n = 6)		CAFS (n = 3)		ALL SFAs ¹ (n = 23)	
	NUMBER (PERCENT) OF SFAs							
Ease of use	12	(86)	0	(0)	0	(0)	12	(52)
Already owned main program	0	(0)	2	(33)	2	(67)	4	(17)
It was only software available	0	(0)	4	(67)	0	(0)	4	(17)
System's other (non-NSMP) capabilities	0	(0)	0	(0)	1	(33)	1	(4)
Price	1	(7)	0	(0)	0	(0)	1	(4)
Recommended by others	1	(7)	0	(0)	0	(0)	1	(4)

¹Includes only SFAs using approved NSMP software at the time of the interview.

SOURCE: SFA director interviews (October-November, 1995).

Exhibit 8

PERSON RESPONSIBLE FOR USING NSMP SOFTWARE

	NUMBER (PERCENT) OF SFAs (n = 26)	
SFA director	16	(62)
Nutritionist or nutrition education specialist	8	(31)
Programmer/data clerk	2	(8)

SOURCE: SFA director interviews (October-November, 1995).

Exhibit 9

SFAs' USE OF AND SATISFACTION WITH SOFTWARE TUTORIALS,
TRAINING AND TECHNICAL ASSISTANCE

	NUTRIKIDS (n = 14)		SNAP (n = 6)		CAFS (n = 3)		ALL SFAs ¹ (n = 23)	
	NUMBER (PERCENT) OF SFAs							
Use of Support Services								
Tutorial	8	(57)	6	(100)	N/A	N/A	14	(61)
Training	11	(79)	2	(33)	2	(67)	15	(65)
Technical assistance	13	(93)	5	(83)	3	(100)	21	(91)
Satisfied with Support Services²								
Tutorial ³	5	(62)	3	(50)	N/A	N/A	8	(53)
Training ⁴	9	(82)	1	(50)	2	(100)	12	(80)
Technical assistance ⁵	12	(92)	3	(60)	2	(67)	17	(81)
Reasons for Technical Assistance Calls⁶								
General operations issues	6	(46)	2	(40)	3	(100)	11	(52)
Recipe analysis	5	(38)	1	(20)	0	(0)	6	(29)
Printing reports	4	(31)	0	(0)	0	(0)	4	(19)
Requesting data base updates	3	(23)	0	(0)	0	(0)	3	(14)
Other	2	(15)	3	(60)	0	(0)	5	(24)

¹Includes only SFAs using approved NSMP software at the time of the interview.

²Base varies for each support service and includes SFAs that reported using the service (see first section of table.)

³Rated tutorial as either very helpful or helpful.

⁴Indicated that training was sufficient to allow successful use of the software.

⁵Rated satisfaction with technical assistance as either very satisfied or satisfied.

⁶Base includes SFAs that reported using technical assistance provided by software vendor (see first section of table).

Source: SFA director interviews (October-November, 1995).

Exhibit 10

STAFF OPINIONS ABOUT NSMP SOFTWARE

	NUTRIKID S (n = 14)		SNAP (n = 6)		CAFS (n = 3)		ALL SFAs ¹ (n = 23)	
	NUMBER (PERCENT) OF SFAs							
Ease of Use								
Very easy	5	(36)	1	(17)	1	(33)	8	(35)
Easy	9	(64)	3	(50)	1	(33)	13	(57)
Difficult	0	(0)	2	(33)	1	(33)	2	(9)
Very difficult	0	(0)	0	(0)	0	(0)	0	(0)
Time Efficiency								
Exceptional	5	(36)	1	(17)	1	(33)	7	(30)
Satisfactory	8	(57)	3	(50)	1	(33)	12	(52)
Somewhat inefficient	1	(7)	2	(33)	1	(33)	4	(17)
Very inefficient	0	(0)	0	(0)	0	(0)	0	(0)

¹ Includes only SFAs using approved NSMP software at the time of the interview.

Source: SFA director interviews (October-November, 1995).

software systems, e.g., the copying and quick search features that *NUTRIKIDS* offers. One of these SFAs is seriously considering a switch to *NUTRIKIDS* for next school year.

In addition, one of the three *CAFS* sites reported being less than pleased with that software program. Staff had encountered numerous problems with the system's performance, and the director has been struggling with the fact that the system can only be operated by highly-skilled staff. These problems have contributed to a substantial delay in implementation.⁷

Standardized Recipes

Standardized recipes are a critical component of the NSMP system. Standardized recipes are recipes that have been tested and shown to produce consistent, high-quality products; they include comprehensive details about specific ingredients and amounts to be used, preparation steps to be followed, and portioning guidelines. The use of standardized recipes promotes consistency in quality and portion sizes across schools. Moreover, they help control food service costs and contribute to accurate nutrient analysis.

NSMP assumes consistent use of standardized recipes in all schools implementing a particular menu. Before a menu can be analyzed, a standardized recipe must be prepared for each menu item. This can be a time consuming process involving actual production and taste tests; recipes often go through many iterations before a satisfactory product (recipe) is developed.

SFA Directors were asked to estimate the proportion of recipe items for which standardized recipes had yet to be developed; results are shown in Exhibit 11. Only nine SFAs (35 percent) reported that all recipe items were standardized. This group was comprised of all seven of the fully-implemented SFAs and two of the partially-implemented SFAs. More than 40 percent of SFAs still had to standardize more than 10 percent of their recipes as of November, 1995. In six SFAs (23 percent), all of which fell into the "not implemented" category, more than a quarter of the recipes were not yet standardized.

Menu Changes

SFA Directors were asked to identify major changes made in menus as a result of NSMP, including menus that are still in the planning stages. Responses are presented in Exhibit 12. In keeping with the pattern of implementation described above, some SFAs were not yet far enough along at the time of the interview to provide meaningful responses; this was especially true for high school menus.

Among SFAs that could provide information, the most commonly reported changes, across all school types, were increased offerings of fresh fruits and vegetables and greater use of low-fat items, particularly low-fat entree items. Approximately one quarter of SFAs reported adding additional servings of foods high in carbohydrates (e.g., breads or grains, fruits, etc.) to elementary school menus and increasing portion sizes in middle and high school menus in order to meet calorie standards and/or the standard for percentage of calories from fat.

⁷During the Spring, 1996 data collection, the other two *CAFS* sites reported comparable difficulties with the system.

Exhibit 11

PROPORTION OF RECIPES NOT YET STANDARDIZED

	NUMBER (PERCENT) OF SFAs (n = 26)	
None (all recipes fully standardized)	9	(35)
1-10 percent	6	(23)
11-25 percent	5	(19)
26 percent or more	6	(23)

Source: SFA director interviews (October-November, 1995).

Exhibit 12

CHANGES IMPLEMENTED IN NSMP MENUS

CHANGE	ELEMENTARY MENUS		MIDDLE SCHOOL MENUS		HIGH SCHOOL MENUS	
	NUMBER (PERCENT) OF SFAs (n = 26)					
More fresh fruits/vegetables	9	(35)	9	(35)	10	(38)
More low-fat items	6	(23)	8	(31)	7	(27)
Added carbohydrate foods to increase calories	6	(23)	0	(0)	0	(0)
Larger portion sizes	0	(0)	6	(23)	6	(23)
Smaller portions of protein foods	5	(19)	4	(15)	3	(12)
More choices each day	4	(15)	4	(15)	2	(8)
More whole grains	4	(15)	3	(12)	3	(12)
Less added salt	2	(8)	2	(8)	2	(8)
Can't say yet	8	(31)	10	(38)	12	(46)

Source: SFA director interviews (October-November, 1995).

Meeting Nutrient Standards

SFA Directors were asked to identify problems experienced in trying to meet nutrient standards. All but three SFAs were able to provide some information on experience with lunch menus; all but eight of the 24 SFAs that offer breakfast were able to comment on breakfast menus.

The standard for which most SFAs reported problems was food energy (Exhibit 13). This was true for both breakfast and lunch menus. Fifteen of the 23 SFAs (65 percent) that commented on lunch and 11 of the 16 (69 percent) that commented on breakfast reported that planned menus failed to satisfy the standard for food energy (calories) for one or more age groups. In addition, roughly three-quarters of SFAs reported having problems satisfying the standard for the proportion of calories from fat at lunch; more than half had problems meeting the standard for saturated fat. Problems with other nutrients were much less common. The only other nutrients identified as problematic by more than one-quarter of the SFAs were vitamin A (for both breakfast and lunch menus) and iron (lunch menus only).

NSMP program requirements do not specify standards for carbohydrate, cholesterol, sodium, or dietary fiber, however, these nutrients are included in the NND-CNP and SFAs are encouraged to monitor them. Only two SFAs reported doing so.

Exhibit 13

MEETING NUTRIENT STANDARDS ¹

MEAL/NUTRIENT STANDARD	STANDARD MET FOR ALL AGE GROUPS		STANDARD NOT MET FOR ONE OR MORE AGE GROUPS	
Breakfast	NUMBER (PERCENT) OF SFAS (n = 16) ²			
Food energy	5	(31)	11	(69)
Protein	15	(94)	1	(6)
Calcium	15	(94)	1	(6)
Iron	13	(81)	3	(19)
Vitamin A	11	(69)	5	(31)
Vitamin C	15	(94)	1	(6)
Percent of calories from fat	12	(75)	4	(25)
Percent of calories from saturated fat	13	(81)	3	(19)
Lunch	NUMBER (PERCENT) OF SFAS ¹ n = 23 ³			
Food energy	8	(35)	15	(65)
Protein	22	(96)	1	(4)
Calcium	21	(91)	2	(9)
Iron	17	(74)	6	(26)
Vitamin A	15	(65)	8	(35)
Vitamin C	20	(87)	3	(13)
Percent of calories from fat	8	(35)	15	(65)
Percent of calories from saturated fat	10	(44)	13	(56)

¹Includes data reported by all SFAs that had analyzed menus, even if the menus had not yet been implemented in schools.

²Twenty-four of the 26 active SFAs offer breakfast in some or all schools. Eight of these SFAs were excluded because they had not yet begun to analyze breakfast menus.

³Three SFAs excluded because they had not yet begun to analyze lunch menus.

Source:SFA director interviews (October-November, 1995).

Chapter 3

OPINIONS AND RECOMMENDATIONS REGARDING NSMP

In an attempt to gauge the acceptability of the NSMP system and to elicit information on implementation challenges and barriers that may be amenable to corrective action, SFA Directors were asked a number of questions that tapped personal opinions about strengths and weaknesses of the NSMP approach. Directors were asked to share candid opinions about NSMP, in general, and the demonstration in particular, and to offer suggestions for improvement. Finally, directors were asked to rate opinions of key stakeholder groups (e.g., parents, teachers, students, food service workers). A comparable series of questions was posed to cognizant State CN directors. Findings from this series of questions are summarized in this chapter.

SFA Directors' Opinions About NSMP

Despite the perceptions that NSMP imposes substantial demands on SFA resources, as discussed in Chapter 2, most SFA Directors have a positive opinion about NSMP (Exhibit 14). Almost three quarters of SFA directors reported having a very positive or somewhat positive opinion of NSMP. Directors of all seven of the fully-implemented SFAs and four of the partially-implemented SFAs had very positive feelings about NSMP.

The group of SFA directors that reported feeling only somewhat positive about NSMP was diverse with regard to implementation status and generally included directors who are very supportive of the goal of NSMP but are feeling somewhat challenged by the work involved. The five SFA directors who reported having a neutral, "wait and see" attitude toward NSMP includes both partially-implemented (n=3) and not-yet-implemented (n=2) SFAs. The two SFA directors who reported having a negative overall opinion of NSMP manage very large, partially-implemented districts. Both whole-heartedly support the goal of NSMP but disagree strongly with a key tenet of the system, the use of weighted nutrient analysis.

The reasons that most SFA directors feel positive about NSMP in the face of delayed implementation schedules and larger-than-anticipated burdens on SFA staff and resources is apparent in the list of program "bests" they generated in response to a survey question (Exhibit 14). Directors clearly support the underlying philosophy of the NSMP system, whether they express their support in terms of personal assurance ("I get an accurate assessment of the nutritional quality of the meals") or in the context of protecting students' interests ("Ensures that children are offered healthy meals").

A substantial number of SFA Directors (more than forty percent) mentioned increased menu planning flexibility as a "best" feature of NSMP. This benefit was mentioned most often by directors of fully-implemented SFAs who cited examples such as the ability to incorporate new entree items without having to adjust recipes to ensure that each individual serving provides two ounces of meat; being able to decrease meat portions in combination items such as pasta dishes and stand-alone items such as peanut butter or grilled cheese sandwiches; the ability to offer previously non-creditable items such as yogurt; and the general freedom of not having to live within the limits of a "five component" menu.

SFA Directors were also asked to identify the negative, or worst, aspects of NSMP. Their responses are consistent with data discussed in preceding sections. The major negatives identified by SFA

Exhibit 14

SFA DIRECTORS' PERSONAL OPINIONS ABOUT NSMP

	NUMBER (PERCENT) OF SFAS (n = 26)	
Overall Opinion of NSMP		
Very positive	12	(46)
Somewhat positive	7	(27)
Neutral	5	(19)
Somewhat negative	2	(8)
Very negative	0	(0)
Best Aspects of NSMP		
Provides accurate assessment of nutrient content of meals	14	(54)
Provides assurance that nutritious/healthy meals are being served	10	(38)
Increases menu planning flexibility	11	(42)
Provides an opportunity to have a positive impact on students' eating habits	4	(15)
Allows development of menus based on specific ages of children	3	(12)
Provides useful information for nutrition education efforts	3	(12)
Don't know	1	(4)
Worst Aspects of NSMP		
Time/labor requirement	14	(54)
Weighted averages	11	(42)
Need to meet all nutrient standards	2	(8)
Wastes paper	1	(4)
Need to continually update software	1	(4)
Software can only be used by skilled staff members	1	(4)

Source: SFA director interviews (October- November, 1995).

directors include the time and labor required to implement the program and the use of weighted averages. Some directors are resistant to the idea of weighted analysis simply because of the work involved in collecting, organizing, and analyzing data from individual schools. Others are concerned that the use of weighted averages will decrease flexibility at the middle and high school levels, and will require significant changes in traditional offerings, which, in turn, may lead to decreased participation.

Attitudes and Perceptions of Key Stakeholders

SFA Directors were asked to rate the attitudes of district financial staff and school food service staff toward NSMP. For most staff groups, more than half of SFA directors reported very positive or somewhat positive attitudes toward NSMP (Exhibit 15). There were some reports of negative attitudes, however.

More than a third of respondents reported that district financial staff were neutral about NSMP. In essence, if NSMP can be implemented without adding costs, then the administration will be supportive. If the system results in additional costs, however, it will immediately be seen as a problem. Three SFA directors reported that financial staff have somewhat negative or very negative attitudes about NSMP. In all cases, the financial authorities were concerned that program costs were increasing under NSMP. One director reported that her administrator would not sign off on the purchase of 1.5 ounce meat portions (rather than the 2 ounce portions required under the old meal pattern), because vendors were charging approximately equivalent prices for both items. Looking strictly at the bottom line, rather than nutritional considerations, the administrator could not agree to getting "less food" for the same amount of money.

Some SFA Directors also reported negative attitudes among school food service workers. Roughly a quarter of the demonstration sites have kitchen managers or cooks who have somewhat negative or very negative attitudes about NSMP. SFA directors attribute these negative attitudes to two factors: 1) increased paperwork associated with NSMP program requirements (e.g., production records, records of leftovers and substitutions, etc.) and 2) worries that student participation will be adversely affected because the new meals will not (or do not) taste as good as pre-NSMP meals.

Finally, SFA directors were asked whether NSMP had affected perceptions about school food service among key stakeholders (teachers, parents, students). More than a quarter of the respondents could not provide answers because they were not far enough along in the implementation process to have communicated with these groups about NSMP or about changes in school food service (Exhibit 16). Among those who were able to respond, the majority indicated that both teachers and parents felt more positive about school food service as a result of NSMP. Four SFA directors indicated that NSMP had had a negative impact on teacher's attitudes about school food service. In all cases, the negative attitude was attributed to teachers' desire for high-fat menu items that had been eliminated, modified, or offered less frequently.

Roughly one-third of SFA directors reported that students felt more positive about school food service; about the same number indicated that there had been no change in student attitudes. The latter response may be influenced by the extent to which SFAs publicized food service changes to students. Many SFAs had not launched student information campaigns. Indeed, some were deliberately avoiding them, believing that student-oriented publicity about healthful menu changes would act as a deterrent to participation rather than an encouragement.

Exhibit 15

FINANCIAL AND FOOD SERVICE STAFF ATTITUDES TOWARD NSMP

STAFF GROUP	VERY POSITIVE	SOMEWHAT POSITIVE	NEUTRAL	SOMEWHAT NEGATIVE	VERY NEGATIVE	DK/NA
	NUMBER (PERCENT) OF SFAS (n = 26)					
District financial staff	7 (27)	7 (27)	9 (35)	1 (4)	2 (8)	0 (0)
Central (food service) office staff	11 (42)	7 (27)	2 (8)	2 (8)	1 (4)	3 (12)
Kitchen managers	5 (19)	11 (42)	3 (12)	5 (19)	2 (8)	0 (0)
Cooks	4 (15)	11 (42)	4 (15)	5 (19)	1 (4)	1 (4)
Cashiers	3 (12)	9 (35)	7 (27)	3 (12)	2 (8)	2 (8)

DK/NA: Don't know or not applicable.

Source:SFA director interviews (October-November, 1995).

Exhibit 16

**STAKEHOLDERS' REPORTED PERCEPTIONS ABOUT SCHOOL FOOD SERVICE
SINCE BEGINNING OF NSMP DEMONSTRATION¹**

STAKEHOLDER GROUP	MORE POSITIVE		MORE NEGATIVE		NO CHANGE		CAN'T SAY YET	
	NUMBER (PERCENT) OF SFAS (n = 26)							
Teachers	12	(46)	4	(15)	3	(12)	7	(27)
Parents	12	(46)	1	(4)	6	(23)	7	(27)
Students	8	(31)	2	(8)	9	(35)	7	(27)

¹SFA directors' reported perceptions.

Source:SFA director interviews (October-November, 1995).

SFA Directors' Opinions about the NSMP Demonstration

SFA directors were asked to provide candid feedback on the NSMP Demonstration: whether they regretted volunteering to participate in the demonstration, reasons for regrets (if any), and recommendations for change. Responses are summarized in Exhibits 17 through 19.

While the majority (58 percent) of SFA directors have no regrets about participating in the demonstration, 42 percent of directors did admit to regrets about getting involved in the project (Exhibit 17). For all of these directors, the staff time required to implement NSMP was the major reason for their regret. Other reasons, mentioned by two or more SFAs, include worries that NSMP will result in more restricted menus; lack of support and guidance from USDA; delay in software approval; and increases in food and labor costs.

Despite these reservations, *none* of the demonstration SFAs would elect to return to the old menu planning system if given the chance to do so (Exhibit 17). Directors of all 26 SFAs still active in the demonstration would continue with NSMP. Eight directors (31 percent) would continue with the current protocol; the remaining 18 directors (69 percent), however, would make changes to one or more aspects of the existing program requirements. The single change mentioned most often was use of weighted averages. Sixty-one percent of the directors who would make changes in NSMP requirements would eliminate weighted averages; another 17 percent would use them only as a monitoring tool.

SFA directors were asked to identify ways in which USDA could have facilitated successful implementation of NSMP for the purposes of the demonstration. Not surprisingly, timely approval of software systems and provision of a more complete data base were the two factors cited most often, by 46 percent and 42 percent of SFA Directors, respectively (Exhibit 18). More than one third of the directors indicated that two-way communication between SFAs and USDA could have been better. Directors expressed frustration that they "never knew what was going on" with software approval, availability of new standardized recipes, data base updates, and the potential impact of new program regulations. Approximately one in five directors indicated a need for more guidance about how to organize and sequence the large number of tasks involved in getting NSMP started. Several of these respondents suggested that the software include "blueprints," i.e., ready-made menus and recipes that could be adapted by users.

SFA directors were also asked to offer suggestions on steps USDA might take to improve the demonstration during its final year (SY 1996-97). Better communication, mentioned by half of all directors, topped the list of suggested improvements (Exhibit 19). Those who offered this suggestion uniformly included both communication *from USDA* to demonstration SFAs and communication *across demonstration SFAs*. Many SFA directors described a sense of isolation and expressed a desire to talk with others about implementation problems and solutions and to have the opportunity to share both information and resources. Several directors suggested that USDA organize one or more group meetings for staff of demonstration SFAs.⁸

⁸Since the time these data were originally collected and communicated to USDA, staff from all demonstration SFAs have attended regional culinary skills workshops sponsored by USDA.

Exhibit 17

SFA DIRECTORS' OPINIONS ABOUT PARTICIPATION
IN THE NSMP DEMONSTRATION

	NUMBER (PERCENT) OF SFAS (n = 26)	
Do you have any regrets about volunteering to participate in the NSMP demonstration?		
Yes	11	(42)
No	15	(58)
Reason(s) for regrets¹		
Labor requirement	11	(100)
Worry that NSMP may result in more restrictive menu	4	(36)
Lack of support/guidance from USDA	2	(18)
Delay in software approval	2	(18)
Increased food costs	2	(18)
Increased labor costs	2	(18)
If you had a choice to return to the old menu planning system or continue with NSMP, which would you do?		
Continue with NSMP (as is)	8	(31)
Continue with NSMP but make changes	18	(69)
Return to old menu planning system	0	(0)
Recommended changes in NSMP²		
Eliminate weighted averages	11	(61)
Use weighted averages only as a monitoring tool	3	(17)
Provide start-up data base that includes fully-analyzed recipes and menus	2	(11)
Use less-stringent nutrient standards	2	(11)
Use traditional rules for Offer-versus-Serve (OVS) ³	1	(6)
Require only one menu for each school level	1	(6)

¹Base includes SFA directors who have regrets about NSMP participation (n = 11). Percentages total to more than 100 because respondents could give more than one response.

²Base includes SFA directors who recommended making changes in NSMP (n = 18). Percentages total to more than 100 because respondents could give more than one response.

³OVS rules dictate how many items a meal must include in order to be considered reimbursable.

Source: SFA director interviews (October-November, 1995).

Exhibit 18

**SFA DIRECTORS' COMMENTS ABOUT WHAT USDA COULD HAVE
DONE TO MAKE NSMP IMPLEMENTATION EASIER**

	NUMBER (PERCENT) OF SFAS (n = 26)	
Approve software earlier or adjust implementation schedule to reflect delay in software approval	12	(46)
Provide better/more complete database	11	(42)
Communicate with sites more often and in a two-way fashion	9	(35)
Provide more specific step-by-step implementation guidelines/start-up materials	5	(19)
Facilitate networking and sharing among demonstration sites	4	(15)
Provide software free-of-charge	2	(8)
Nothing	2	(8)

Source: SFA director interviews (October-November, 1995).

Exhibit 19

SFA DIRECTORS' RECOMMENDATIONS FOR FUTURE
IMPROVEMENTS IN THE NSMP DEMONSTRATION

	NUMBER (PERCENT) OF SFAs (n = 26)	
Improve communication	13	(50)
Improve data base	9	(35)
Eliminate or simplify weighted averages	9	(35)
Provide funds to cover labor, food, software costs	4	(15)
Organize group meeting(s) of demonstration sites	3	(12)
Approve (currently unapproved) software	3	(12)
Provide in-depth training/technical assistance to SFAs that need it	3	(12)
Extend timeline for implementation	2	(8)
Provide more standardized recipes	2	(8)
Increase saturated fat standard	1	(4)
Be more aggressive in efforts to avert demonstration drop-outs	1	(4)
Don't know	7	(27)

Source: SFA director interviews (October-November, 1995).

Improving the nutrient database and dropping or simplifying weighted averages were the next most common suggestions, each offered by more than a third of SFA directors. With regard to the nutrient database, a primary concern was the need to add nutrient information for nationally available commercial products at the local level. This process results in a substantial amount of redundant effort because SFAs across the country have to enter the same foods. Moreover, it invites data entry errors and other data quality problems. Many *NUTRIKIDS* users were confused about whether it was acceptable to use the commercial products nutrient data base the software manufacturer has added to the NND-CNP. Several respondents who were particularly knowledgeable about nutrition and dietary data analysis expressed concerns about the accuracy of the nutrition data supplied by vendors and, in some cases, included in the *NUTRIKIDS* data base. A related concern is that many SFA directors are not able to detect errors in nutrient values provided by vendors because of their lack of experience with nutrition data.

The general feeling among these SFA directors is that USDA should be building the data base and maintaining its integrity and that only a minimal number of items should be added at the local level.

State Directors' Experiences and Opinions

The 26 SFAs still active in the demonstration are spread across 19 different States. Most States have one demonstration district, none has more than two. CN Directors in each of these States completed a brief interview that queried their experiences with NSMP, acquired through site visits or telephone communication with staff in demonstration SFAs. The interview also tapped State agency directors' perceptions about monitoring under NSMP and potential impacts at the State level. Finally, CN Directors were asked to provide candid information on their personal opinions about NSMP as well as their assessment of attitudes toward NSMP among non-demonstration SFAs.

Sixty-three percent of State directors reported having SFA-initiated telephone contact with demonstration SFAs (Exhibit 20). Issues discussed during these conversations were almost universally related to implementation, ranging from questions about software approval and acquisition (42 percent) to the need for general reassurance that the district would be able to implement NSMP successfully (10 percent). Four State directors indicated that they, or staff in their office, were very involved in assisting SFAs with implementation.

At the time formative evaluation interviews were conducted, fewer than half of the State agencies had actually visited the NSMP district(s) in their State (Exhibit 21). Of the eight States that had visited an NSMP site, all but three (62 percent) had at least one concern about what was observed during the visit. The most common concern was that SFAs were going to have trouble dedicating the amount of staff time and resources required to implement NSMP within the demonstration time frame. This observation is certainly consistent with views expressed by SFA directors. Other concerns mentioned by State CN directors included the need for additional staff training and the apparent inadequacy of food production records maintained by SFA staff.

State directors have their own concerns about NSMP implementation. Virtually all Directors indicated some uncertainty about how SFAs would be monitored under NSMP. Eight-four percent believe, however, that monitoring procedures will have to be changed for NSMP sites (Exhibit 22). Moreover, they believe that these changes will increase the time required for monitoring visits and, in most cases, the number of staff required to complete monitoring visits on a regular cycle. In addition,

Exhibit 20

SFA-INITIATED CONTACTS WITH STATE AGENCIES

	NUMBER (PERCENT) OF STATE OFFICES (n=19)	
Contacted by one or more demonstration SFAs	12	(63)
Issues discussed¹		
Software approval/demonstration time line	8	(42)
Implementation/protocol requirements	6	(32)
“Everything”; State office very involved in implementation	4	(21)
Data base content/update	3	(16)
Concerns re: ability to meet staff/resource requirements	3	(16)
General reassurance	2	(10)

¹Base includes State offices that reported contact with one or more demonstration SFAs (n = 12). Percentages total to more than 100 because respondent could report more than one discussion issue.

SOURCE: State director interviews (October - November 1995).

Exhibit 21

STATE VISITS TO DEMONSTRATION SFAS

	NUMBER (PERCENT) OF STATE OFFICES (n = 19)	
Visited one or more demonstration SFAs	8	(42)
Concerns raised during site visits¹		
Potential problem meeting staffing requirements	5	(62)
Need for increased staff training	3	(38)
Inadequate/incomplete production records	4	(50)
Questions about appropriateness of implementation	2	(25)
None (no concerns)	2	(25)

¹ Base includes State offices in which staff had visited one or more demonstration SFAs (n = 8). Percentages total to more than 100 because respondents could report more than one concern.

Source: State director interviews (October - November, 1995).

Exhibit 22

STATE DIRECTORS' EXPECTATIONS FOR MONITORING UNDER NSMP

	NUMBER (PERCENT) OF STATE OFFICES (N=19)	
Do you expect a need for change in current monitoring procedures?		
Yes	16	(84)
No	1	(5)
Don't know	2	(11)
Expected procedural changes¹		
Need to conduct nutrient analysis	5	(31)
Need to check accuracy of data input	6	(38)
Need to examine nutrient analysis	6	(38)
Need to spend more time on-site	2	(12)
Other	2	(12)
Don't know	2	(12)
Are your current resources sufficient for monitoring under NSMP?		
Yes	6	(32)
No	10	(53)
Don't know	3	(16)
Expectation re: time requirement for monitoring under NSMP		
Will need more time	16	(84)
Will need same amount of time	1	(5)
Don't know	2	(11)
Expectation re: staffing requirement for monitoring under NSMP		
Will need more staff	14	(74)
Will need same number of staff	4	(21)
Don't know	1	(5)
Expectation re: staff with requirement for nutrition/computer expertise		
Will need more staff with this expertise	16	(84)
Will need same number of staff	2	(11)
Don't know	1	(5)

¹Base includes State directors who expect a need for change in SFA monitoring procedures under NSMP (n = 16). Percentages total to more than 100 because respondents could cite more than one change.

Source: State director interviews (October-November, 1995).

most State CN Directors envision a need to use different types of staff for monitoring visits: specifically, staff who have nutrition and/or computer expertise.⁹

As a group, State CN directors are somewhat less enthusiastic about NSMP than directors of SFAs participating in the demonstration. While 46 percent of SFA directors feel very positive about NSMP (see Exhibit 14), only 16 percent of State directors hold this opinion (Exhibit 23). Half of the State directors rated their opinions as somewhat positive and another 20 percent reported a neutral opinion. The general feeling conveyed by both of these groups was support of the NSMP concept but reservations about the ability of SFAs to successfully implement the program.

Almost 70 percent of State directors believe that SFAs will find NSMP implementation to be challenging or extremely challenging. Primary reasons cited for concerns were paperwork and time requirements (58 percent), and lack of communication from USDA (37 percent).

The final questions posed to State CN directors tapped their assessment of attitudes toward NSMP among other SFAs in their State. According to State CN directors, other SFAs had a fairly negative attitude toward NSMP in November, 1995 (Exhibit 24). Fifty-eight percent of surveyed State directors said most of the SFAs in their States had a somewhat negative attitude toward NSMP; another 21 percent of State directors reported a very negative attitude. A majority of State directors estimated that 5 percent or less of SFAs would elect the NSMP menu planning option. Only three State directors (16 percent) predicted that more than 20 percent of SFAs would adopt NSMP.¹⁰

Reasons cited by State directors for SFA resistance to NSMP include, in descending order, fear of change, concerns that staff lack required skills, concerns about time/staffing requirements, "fear" of computer technology, concerns about student acceptance, and general disagreement with the NSMP philosophy and rationale. Some SFA directors have reportedly adopted a neutral, "wait and see" attitude toward NSMP.

⁹The Food and Consumer Service convened a task group of State and Federal personnel to prepare optional forms and guidance to assist States in monitoring any of the updated menu planning systems, including NSMP. The draft guidance has been provided to States for comment and will be distributed for use near the beginning of the school year. The material has been well received, and will relieve States of the necessity for developing their own review materials, though they may do so if they wish.

¹⁰Informal survey information collected by FCS Regional Offices indicates that a larger number of SFAs, in the range of 15 to 20 percent in most States, are considering use of NSMP.

Exhibit 23

STATE DIRECTORS' PERSONAL OPINIONS ABOUT NSMP

	NUMBER (PERCENT) OF STATE DIRECTORS (N = 19)	
Overall Opinion of NSMP		
Very positive	3	(16)
Somewhat positive	10	(53)
Neutral	4	(21)
Somewhat negative	2	(11)
Very negative	0	(0)
Assessment of Inherent Challenge in NSMP Implementation		
Extremely challenging	6	(32)
Challenging	7	(37)
Somewhat challenging	3	(16)
Not at all challenging	0	(0)
Don't know	3	(16)
Reservations/Concerns		
Paperwork/time requirement unrealistic	11	(58)
Better communication needed from USDA to all levels	7	(37)
Poor timing/planning	5	(26)
Delay in software approval	5	(26)
Demo sites not representative of most SFAs	3	(16)
Worry that NSMP will affect nutritional integrity	3	(16)
Worry that NSMP will cost more	3	(16)
Other	5	(26)

Source: State director interviews (October-November, 1995).

Exhibit 24

STATE DIRECTORS' OPINIONS ABOUT ATTITUDES TOWARD
NSMP AMONG DIRECTORS OF NON-DEMONSTRATION SFAS¹

	NUMBER (PERCENT) OF STATE DIRECTORS (N = 19)	
General Attitude About NSMP		
Very positive	0	(0)
Somewhat positive	1	(5)
Neutral	3	(16)
Somewhat negative	11	(58)
Very negative	4	(21)
Reasons for Less Than Very Positive Attitude		
Fear of change	6	(32)
Worry that staff skill-level is inadequate	6	(32)
Worry about time/staff requirement	4	(21)
Fear of technology/not computer literate	4	(21)
Have adopted "wait and see" attitude	3	(16)
Worried about student acceptance	3	(16)
Don't support philosophy/rationale	2	(11)
Estimated Proportion Who Will Implement NSMP		
5 percent or less	11	(58)
6-20 percent	3	(16)
More than 20 percent	3	(16)
Don't know	2	(11)

¹State directors' reported perceptions about directors of non-demonstration SFAs.
Source: State director interviews (October - November, 1995).