

Availability of Flavored Milk in Schools

June 2006

Conducted by:

School Nutrition Association



Child Nutrition Foundation



National Dairy Council



Executive Summary

The National Dairy Council, in conjunction with the School Nutrition Association and the Child Nutrition Foundation, conducted a study to assess current availability and potential interest in offering various flavors and nutrient contents (e.g. fat & sugar levels) of milk in schools. The information gained from this study will help the School Nutrition Association and its members better understand the trends in milk availability in schools.

Overview of Findings

School foodservice professionals (directors, managers, and supervisors) representing 1528 school districts were surveyed regarding their current milk offerings and interest in future offerings to students.

The major findings of this study reveal that both white and flavored milks with reduced fat levels are widely available in schools. Furthermore, there is interest among school nutrition professionals in offering additional milk flavors and milk with reduced sugar levels.

Current Offerings:

Almost all school districts currently offer both white and chocolate milk

- White milk was offered in 99% of the districts
- 97% of the districts offer flavored milk/s. **Chocolate** is the most common flavor variety, being offered in almost all of the schools that serve flavored milk. **Strawberry** and **Vanilla** flavor varieties are currently offered in 65% and 24% of schools respectively. While only offered in approximately 10-15% of schools, **Coffee/Mocha** flavored milk variety are available in some districts.

Almost all school districts currently offer milk with reduced fat levels (e.g. 2%, 1%, or fat free/skim).

White milk was commonly offered with different fat levels (e.g. 2%, 1%, and fat free/skim).

Flavored milks were most commonly offered at a 1% fat level.

Only one-third of school districts report offering milk in vending machines

Among those that do offer milk in vending machines, 1% and 2% chocolate, white and strawberry milk were the most popular varieties.

Potential Interest:

High degree of interest in serving different types of milk varieties in the future by School Foodservice Programs

81% are interested in adding more reduced fat varieties of milk

A majority of districts are interested in offering flavored milk with reduced sugar levels

Of districts not currently offering particular flavors of milk, there is interest in expanding offerings to include those flavors, particularly for chocolate, strawberry, and vanilla milk.

School Foodservice Programs indicated some interest in reduced sugar flavored milk. However, there is a high level of rejection to the concept of using artificial sweeteners in these products

Full Report

Summary

The National Dairy Council, in conjunction with the School Nutrition Association and the Child Nutrition Foundation, conducted a study to assess current and future availability of milk in various flavors and fat content. This information will help further the efforts of these organizations as they continue to work together to encourage schools to offer a variety of milk flavors to students.

Recent concern on rising rates of child overweight and health status coupled with a decline in milk consumption among children reflects the need to promote and implement health school environments. Milk makes key contributions to children's nutritional status and potentially displaces less nutritious beverages in the diet. Increasing a variety of milk flavors has been shown to contribute to increased participation in school meals programs as well as increased consumption of milk by students. Though nutrition professionals have not shown widespread concern about the added sugar present in flavored milk in the context of a healthy diet, reduced sugar and sugar substitutes have become more prevalent in food and beverage offerings in the United States and are desirable to many consumers. As childhood weight concerns continue, flavored milk with reduced sugar levels may be desirable to foster increased milk consumption without increasing added sugar.

This report provides a summary of key descriptive statistics and conclusions available from the online survey completed by SNA members to assess the current and future availability of flavored milk in school meals programs, a la carte lines, and vending programs in school districts that participate in the National School Lunch Program.

Methodology

A link to an online questionnaire was sent to approximately 11,638 e-mail addresses in the School Nutrition Association's membership database. The same link was posted on the School Nutrition Association's web site approximately one week later notifying inviting individuals to complete this questionnaire. A short excerpt and direct link from the article were also distributed to recipients of select SNA newsletters during the survey period. Both the direct email and the web article notified potential respondents that a condition for participation was operation of the National School Lunch Program. Potential participants were also notified of a chance to win one of five \$50 gift certificates to SNA's Emporium upon full completion of the questionnaire.

The survey was conducted from September 19, 2005 through October 7, 2005. The questionnaire included 6 questions that assessed the district's basic profile and the job title of the respondent, 11 questions about current milk offerings, and 4 questions about future milk offerings. An additional 4 questions collected

contact information from the respondent for use in the prize drawing. The questionnaire required each respondent to answer each question in order to proceed to the next question. Survey Monkey was used as the online data collection and analysis tool. Microsoft Excel was used for data analysis and presentation and will be used for further analysis.

Data Notes

Prior to data analysis, the responses were checked for duplicate responses from a particular school district. All responses from duplicates were deleted from the data set prior to analysis. Four responses were also deleted because it seemed that the respondent had reported the district name as an enrollment number. Responses that reported the name of a school rather than a district were also deleted. Because not all survey respondents completed all questions, the total number of responses per question varied. For analysis, the total number of complete responses for each particular question were used.

The final data set used for the information that follows included 1,330 responses. Note that due to survey design, those respondents who responded that flavored milk was not served automatically skipped all questions assessing current service of flavored milk. These respondents were able to respond to questions assessing future interest in serving types and varieties of flavored milk. Any respondent that did not complete a particular question was not allowed to proceed to the next question in the survey. Some data was analyzed for a particular subset of those responding to a particular question as appropriate. Sample sizes are reported for each question in the results and discussion.

Response Rate

A total of 1,528 responses were received. It is not possible to accurately assess response rate because the survey link was made public. It is also not possible to determine the percentage of email addresses in the blast email that were valid addresses or were not rejected or filtered before reaching the intended recipient. However, prior to posting of the link on SNA's website, 1,380 responses were received. This is 11.9% of the number of blast emails sent. This is a conservative estimate of participation among those SNA members directly contacted, as some individuals who received the blast email may have responded after the web article was posted. In addition, the number of emails sent overestimates the number of emails that were delivered successfully, which would further underestimate the response rate to the blast email. This response rate compares favorably to typically response rates to online questionnaires. The response was also considerably higher than the estimated target goal of 500, based upon response to a similar design conducted by NDC, SNA, and CNF in 2004.

Results and Discussion

Demographics

Results were received from every state.

Greater than 40 responses were included in the final sample from the following states:

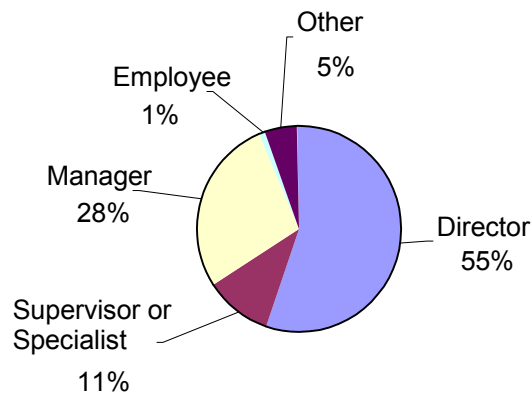
California, Georgia, Indiana, Kansas, Michigan, Minnesota, North Carolina, Ohio, Pennsylvania, Washington, and Wisconsin.

Fewer than 10 responses were included in the final sample from the following states:

Alaska, District of Columbia, Hawaii, Nevada, Rhode Island, Vermont, West Virginia, and Wyoming.

Job Title of Respondent

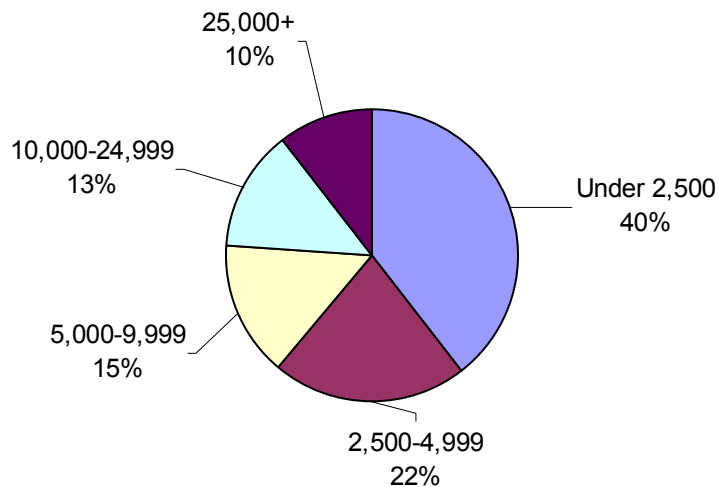
The majority of respondents in the final sample reported their job title as “director”. This was the desired target audience. The director would have the greatest level of knowledge about operations district wide. A supervisor or specialist might have responsibilities throughout a district or in part of a district. Not all districts have staff with a job title of supervisor or specialist. A manager typically has responsibilities within one school. However, in some states, the person who acts as the “director” of the program as defined by the roles and responsibilities of a typical director position may have a job title of “manager” or another title that is neither director nor manager. Approximately 2/3 of the respondents in the final survey reported their job title as directors or supervisors/specialists. Approximately 94% reported their job title as directors, supervisors or specialists, or managers. Those reporting “other” were able to provide a job title. Some of these titles did reflect district-wide roles and responsibilities, such as nutrition coordinator, assistant director, business manager, operations manager, office manager, buyer, and dietitian. Some of the other responses also related to the employee or manager category job titles, but the respondent chose to provide a more specific title.



District Size

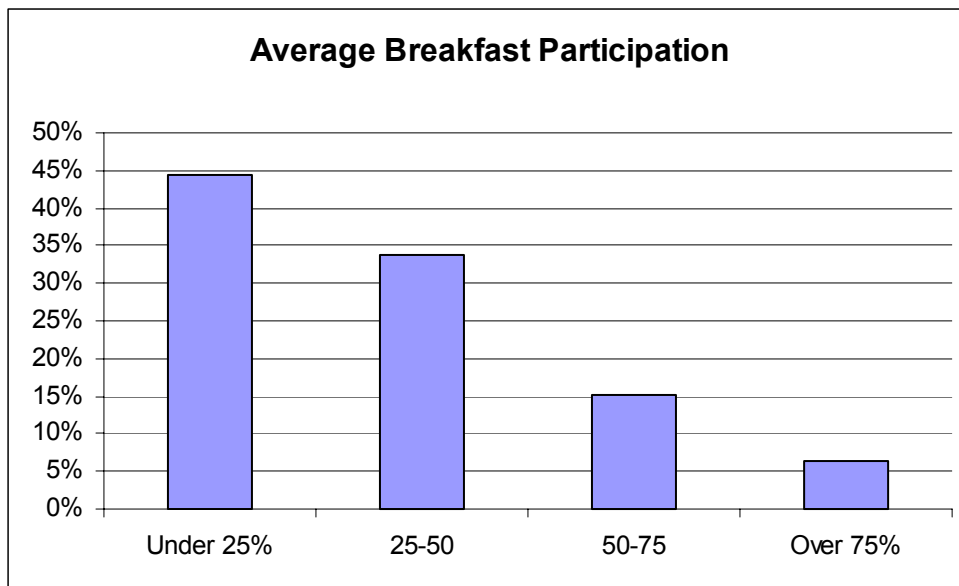
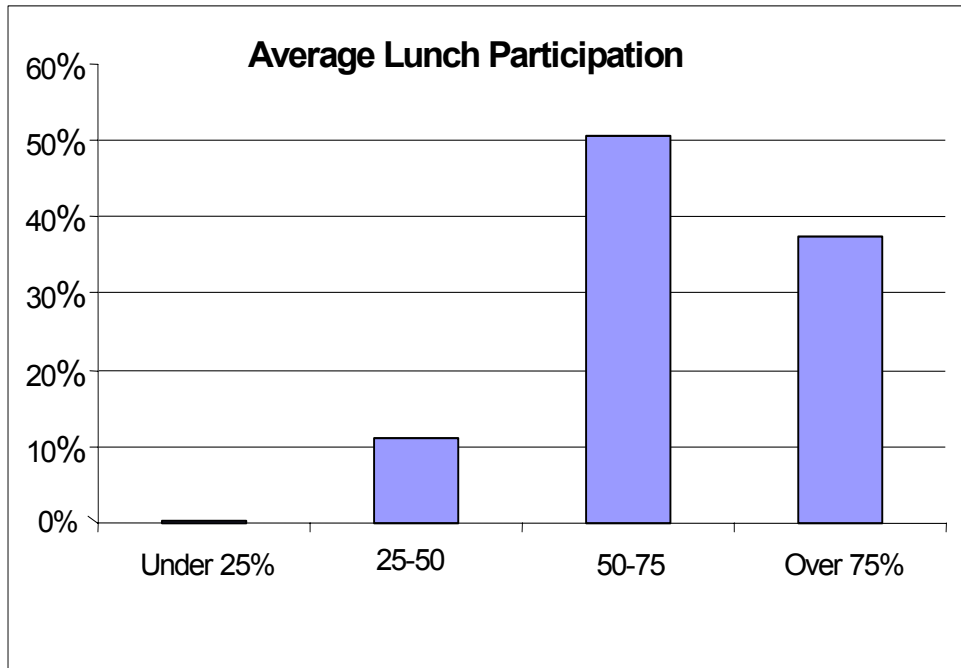
The majority of school districts in the sample were reported to have student enrollment of less than 2,500. Nearly 2/3 of the final sample were reported to

have student enrollment of less than 5,000 students. Only 10% of the school districts in the final sample were reported to have student enrollment of greater than 25,000 students. This distribution is similar to that observed in the School Nutrition Association's 2005 Operations survey but includes a greater proportion of larger districts than the national district enrollment statistics indicate (National Center for Education Statistics, Common Core of Data, 2002-2003.) In this national data, 1.7% of school districts in the nation have greater than 25,000 students while 70.8% of school districts enroll less than 2,500 students.



Average Lunch and Breakfast Participation

The average lunch participation and average breakfast participation reported for school districts in the final sample are summarized in the following charts. Because these participation levels were reported as overall participation levels rather than as paid participation levels and free/reduced participation levels, they are difficult to compare to the School Nutrition Association's 2005 Operations Survey. However, both average lunch participation and average breakfast participation do seem consistent with the median data reported in SNA's Operations survey.



Overview of School Milk Offerings

White milk is offered by 99% of school districts. In addition, flavored milk is offered by 97% of school districts. Almost all school districts (94%) offer flavored milk five days a week. Milk with reduced fat levels (2%, 1%, or fat-free varieties) is offered by 99% of school districts.

Variety Availability

White milk is almost universally available on the meal line. However, there are a substantial minority of schools that do not offer white milk in a la carte.

Variety Availability – White Milk

Type of White Milk	% of School Districts Offering	
	Meal Line (n= 1160)	A la Carte (n=1160)
Fat Free or Skim	55	43
Low-fat or 1%	62	49
Reduced Fat or 2%	54	45
Whole	21	18
Not served	1	17

Chocolate milk is almost always offered on the meal line. Chocolate milk with a 1% fat level is the most commonly available variety. About 15% of schools do not offer chocolate on the a la carte line; this reflects that not all school districts have a la carte.

Variety Availability – Chocolate Milk

Type of Chocolate Milk	% of School Districts Offering	
	Meal Line (n= 1160)	A la Carte (n=1160)
Fat Free or Skim	28	22
Low-fat or 1%	65	55
Reduced Fat or 2%	10	15
Whole	1	6
Not served	1	15

Strawberry milk is offered in about 65% of districts on both the meal line and a la carte line. Low fat (1%) is the most popular fat level for strawberry milk.

Variety Availability – Strawberry Milk

Type of Strawberry Milk	% of School Districts Offering	
	Meal Line (n= 1160)	A la Carte (n=1160)
Fat Free or Skim	9	7
Low-fat or 1%	44	39
Reduced Fat or 2%	10	14
Whole	1	5
Not served	35	36

Vanilla milk is currently offered by approximately one-quarter of school districts. Low-fat vanilla milk is the most widely available fat level.

Variety Availability – Vanilla Milk

Type of Vanilla Milk	% of School Districts Offering	
	Meal Line (n= 1160)	A la Carte (n=1160)
Fat Free or Skim	3	3
Low-fat or 1%	13	15
Reduced Fat or 2%	6	3
Whole	2	1
Not served	72	73

Coffee/mocha milk is offered by 10-15% of school districts.

Variety Availability – Coffee/Mocha Milk

Type of Coffee/Mocha Milk	% of School Districts Offering	
	Meal Line (n= 1160)	A la Carte (n=1160)
Fat Free or Skim	0	1
Low-fat or 1%	3	4
Reduced Fat or 2%	1	2
Whole	0	1
Not served	89	85

Beyond chocolate, strawberry, and vanilla, no other flavored milk variety has a widespread availability in schools. About 12% of school districts serve other flavors on the line. About 14% offer other flavors a la carte. Other flavors might include banana, orange/orange cream, dulce de leche, blue raspberry, raspberry, blueberry, rootbeer, cookies, and cream, and dulce de leche. Many school foodservice directors also included other beverages and milk varieties that are not, strictly speaking, milk flavors in this category. These products included branded products (i.e. Healthy Cow), organic milk, milkshakes and smoothies, and substitutes and alternatives (i.e. Lactaid, soy milk).

One in five school districts (20%) reported offering milk with reduced sugar levels. Only a small minority (2%) report offering milk with artificial sweeteners.

Vending

One third of school districts reported offering milk vending. Among those with milk vending machines, low-fat and reduced-fat chocolate, white, and strawberry milk were the most popular varieties. (Show chart slide 17)

Interest in New Flavors and Varieties in the Future

Nearly all respondents not currently offering chocolate milk were extremely or very interested in serving this flavor in the future. Over one-third who were not currently serving strawberry or vanilla milk were extremely or very interested in serving these flavors in the future. Just under one-quarter were extremely or very interested in serving coffee/mocha milk. There was also a high level of disinterest (52% not/not at all interested) in serving coffee/mocha milk, perhaps due to concerns about caffeine.

Interest in New Flavors

Type of Milk	% Extremely/Very Interested in Serving in the Future n = number not already serving the flavor
Chocolate	85%
Strawberry	39%
Vanilla	36%
Coffee/Mocha	21%

The overwhelming majority of school foodservice directors (81%) want to add reduced fat varieties. More than half (56%) are interested in a flavored milk with reduced sugars. Approximately 44% of school foodservice directors said they were not or not at all interested in milk with artificial sweeteners. Only 21% expressed a strong degree of interest in such a product.

Conclusions

The results from these survey provide a picture of the varieties and flavors of milk that are currently offered in schools. These results also provide information on the level of interest that decision makers have in offering new flavors or varieties of milk. The results show that while all school districts that participate in the National School Lunch Program and School Breakfast Program serve milk with meals, not all of these schools offer milk a la carte. Even fewer schools offer milk in vending machines.

These results can be used by school foodservice directors to compare the varieties and flavors of milk served in their districts to a national sample. These results can also be used by the dairy industry to explore products and services that may be beneficial to schools.