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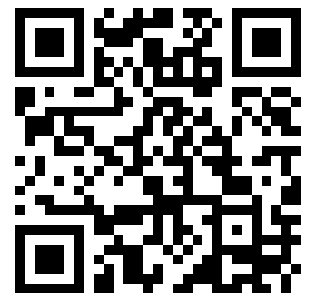
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**STATUS AND ACHIEVEMENTS OF THE EXPANDED
FOOD & NUTRITION EDUCATION PROGRAM**

MARKETING ECONOMICS DIVISION
ECONOMIC RESEARCH SERVICE
U.S. DEPARTMENT OF AGRICULTURE

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STATUS AND ACHIEVEMENTS OF THE EXPANDED FOOD & NUTRITION EDUCATION PROGRAM

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ABSTRACT: The primary objective of the Expanded Food and Nutrition Education Program is to help low-income families acquire the knowledge, skills and changed behavior necessary to achieve more adequate diets. At the end of June 1970, over 7,000 nonprofessional aides were working with 237,000 families. Since the beginning of the program about 348,000 families representing an estimated 1.7 million persons have been enrolled in the program. Progress is reflected both in level of nutrition knowledge and food consumption practices. Food readings taken of homemakers in the program show that the proportion of homemakers with a minimum adequate level of consumption rose from an initial 9 percent to 16 percent after 6 months and 19 percent after 12 months. The proportion of homemakers consuming one or more servings in each of the 4 basic food groups rose from an initial 56 percent to 69 percent after 6 months and to 74 percent after 12 months.

KEY WORDS: Nutrition education, food consumption of low-income families, food practices.

Numerous surveys have revealed disturbing facts about the diets of the U.S. population. Generally the data show significant shortcomings in the diets of all income groups but particularly among low-income families. Lack of sufficient income to buy good nutrition is recognized as a major constraint. But the prevalence of poor dietary practices raises questions as to the efficiency and equity of our food marketing system and the ability and skills of consumers to acquire and use foods which provide the best nutrition.

Various approaches are being used to solve or alleviate food consumption problems of low-income people. Ways to improve the efficiency and responsiveness of food distribution in low-income urban areas are being sought. Eligible families are being helped through various forms of general economic assistance and public food assistance programs. Food and nutrition education is being offered from many sources to increase awareness of the need and essentials of good nutrition. While many of these approaches do not focus directly on marketing, all have significant implications to and potential impact on the food distribution system.

A current major effort by USDA is the Extension Service's Expanded Food and Nutrition Education Program. While food and nutrition education has always played a major role in the agency's program, new dimensions and emphasis are reflected in the expanded program authorized in November 1968. These changes include orientation of the program toward hard-to-reach families in poverty of which a large proportion are of minority groups living in urban areas. Also in contrast to traditional programs where professionals are the main source of contact with clients, nonprofessionals (aides) are depended upon to deliver this program.

Program Objectives

The primary objective of the Expanded Food and Nutrition Education Program is to help families in poverty acquire the knowledge, skills, and changed behavior necessary to achieve adequate diets. More specific goals are: to increase families' knowledge of the needs and essentials of good nutrition; to improve their ability and practices in selecting and buying foods and preparing and serving them in nutritional and palatable meals; to develop

improved food handling and sanitation practices; and to enhance participating families' ability to secure and manage their resources so as to realize maximum value and satisfaction. Supportive objectives include increased participation of eligible families in USDA food programs and other forms of public assistance which may be available in the community. Although the program is oriented to nutrition education, it recognizes that other problems in family living must be identified and dealt with if these families are to acquire improved nutrition practices.

Operating funds for the program are allocated to the State cooperative extension services primarily on the basis of the percent of the total U.S. poor in each State. Except for funds ear-marked for hiring professionals to supervise or direct 4H type work with youth, the major use of funds is restricted to salaries and support of nonprofessional aides. Field implementation began in early 1969 through the State cooperative extension services.

Management and Evaluation Information

Before the program began, an information system was developed to provide data for management direction and evaluation. The base of this information system is provided by the aide's records on each participating family. Information is obtained on socio-economic and other characteristics of the family and nutrition knowledge and food consumption practices of the homemaker of families as they enter the program and at intervals as they participate.

The primary purpose of the information system is to help the aide and program management identify a family's needs, the resources available to the family, and the achievement of the family in respect to the program goals. In addition, each program unit periodically summarizes and reports to the Extension Service selected data which reflect program status in terms of the profile of families being reached and achievements of families in terms of change in nutrition knowledge and food consumption practices of program family homemakers. Such data are now available for examining program performance through March 1970.

While a comprehensive evaluation of family achievement requires identification of the response of individual families, aggregative data accurately reflect who is being reached and the level and rate of change in families' food consumption practices.

Program Scope

At the end of June 1970, over 7,000 aides were working with 237,000 families. Since the beginning of the program about 348,000 families including an estimated 1.7 million persons have been enrolled and more than 11,000 aides have been trained and have worked with these families. Most families are worked with on an individual basis. However, the number of families being taught in groups has increased significantly. In addition to the program families, an average of 39,000 nonprogram families have been contacted or worked with each month by the aides for a cumulative total of 667,000 through June 1970. At the end of June, a full-time equivalent aide was responsible for an average of 46 program families and had contacted 12 nonprogram families during the month.

At the end of June the program was operating in more than 900 counties, independent cities and Indian reservations in all of the 50 states, District of Columbia, Puerto Rico, and the Virgin Islands.

In addition to involving a large number of people, the program has reached its target population--hard to reach families in poverty. As of March 1970, over 60 percent of the program families, averaging about 4.8 persons, reported annual incomes of less than \$3,000. Three out of 10 families received public assistance and 4 out of 10 participated in USDA food programs. Similarly the program has been successful in moving into urban areas and involving minority groups. About 60 percent of families lived in urban areas while less than 10 percent lived on farms. About 30 percent of the families were Caucasian. Over 30 percent of family homemakers reported less than an 8th grade education.

Families participating in the program at the end of March 1970 contained close to 600,000 children. In addition to being reached through their family's involvement in the program, youth also are being taught through 4H type activities. Over 110,000 youth (generally 9 to 19 years of age)--about half from program families--were involved in the 4H youth component during June 1970.

With the exception of a rise in the proportion of families with annual incomes of over \$3,000, the profile of program families has not changed significantly over the reporting periods shown in table 11. This shift appears primarily to reflect income status of families added as the program expanded rather than that of families leaving the program. However, a continuing orientation of the program to low income families is indicated by the fact that in all reporting periods less than 9 percent of the families had incomes of \$5,000 and over.

Nutrition Knowledge and Food Consumption Practices

Information obtained from homemakers at 6-month intervals provides an aggregative view of the level of nutrition knowledge and food consumption practices of homemakers as they enter and continue in the program (table 12).

Through March 1970 initial food readings have been obtained on over 215,000 homemakers. These show that only 9 percent of homemakers entering the program reported consumption of the recommended minimum number of servings of food in each of the 4 major food groups (2 each of milk and meat and 4 each of vegetables/fruit and breads/cereals) considered essential for an "adequate" diet. Only 56 percent of the homemakers reported at least 1 serving each of the 4 food groups during the 24-hour recall period. More specifically, initial food readings showed that 32 percent of the homemakers did not consumer any milk products and 13 percent no vegetables and fruits.

Initial responses to the question "What food and drink do you think people should have to keep healthy?" found less

than half of the homemakers naming a food in each of 4 basic food groups.

Program Results

Changes in the level of nutrition knowledge and consumption practices of homemakers are reflected in second and third food readings taken after 6 and 12 months of program participation. Note that the readings were not obtained on all family homemakers and, more importantly, that families left the program between scheduled readings. Neither the characteristics nor nutritional status of these families or homemakers can be determined from the aggregative data reported. However, the profile of participating families has not changed significantly, indicating that families who have left were not confined to any special group or characteristic.

Food readings taken of homemakers in the program for 6 months show that the portion of homemakers with a minimum adequate level of consumption rose to almost 16 percent and after 12 months to over 19 percent from the initial 9 percent.

The proportion of homemakers reporting one or more servings in each of the 4 food groups rose from an initial 56 percent to 69 percent after 6 months and to 74 percent after 12 months. Only 17 percent of the homemakers who had been in the program a year failed to consume milk products in the 24-hour recall period in contrast to 32 percent when entering the program. Progress is also indicated by a decline in the proportion of homemakers not consuming vegetables and fruits.

Improvement among homemakers in the recognition of need and essentials for proper nutrition is indicated by the fact that after a year in the program 7 out of 10 indicated that for a good diet, foods in all food groups should be consumed.

To give access to more food or more resources for acquiring their food needs, program families, if eligible, are encouraged to participate in USDA food assistance programs. Success in this area appears to be mixed. Prior to January 1970 the combined monthly rate of participation

Table 11.--Profile of families and aides participating in the Expanded Food and Nutrition Education Program

Program families <u>1/</u>	March 1969	September 1969	March 1970
	<u>Number</u>		
Participating <u>2/</u>	54,223	138,666	204,475
Persons in families	324,404	657,097	981,874
Children in families <u>3/</u>	NA	NA	584,905
Average size of families	4.7	4.7	4.8
Cumulative program families <u>4/</u>	71,507	184,279	291,758
	<u>Percent</u>		
Characteristics of families			
Annual income			
Less than \$1,000	24	19	16
\$1,000-2,999	47	46	47
\$3,000 and over	29	35	37
Ethnic grouping			
Caucasian	29	33	33
Negro	54	50	48
Spanish-American	14	15	17
Other	3	2	2
Residence			
Urban	53	59	59
Rural nonfarm	36	32	33
Farm	11	9	8
Receiving welfare	29	32	32
Education of homemaker less than 8th grade	34	32	34
Participating in USDA food programs			
Food Stamps	14	15	18
Donated Foods	24	23	23
Total	38	38	41
	<u>Number</u>		
Program aides			
Employed <u>5/</u>	3,591	4,314	6,886
Full-time equivalents	2,966	3,262	5,379
Ethnic grouping			
Caucasian	40	39	43
Negro	47	48	43
Spanish-American	11	11	11
Not identified	2	2	3

1/ Program families include only those for which specified classification information was obtained.

2/ Number of families participating as reported at end of each month. In June 1970 there were 237 thousand.

3/ Includes children through 19 years of age in program families.

4/ Includes families who participated in the program but left between reporting periods. Does not include a large number of families who were contacted by aides each month but were not enrolled in the program at the end of the month.

5/ Represent total number of trained aides working. Full time equivalents are based on 40 working hours per week.

Table 12.--Proportion of homemakers consuming selected foods during a 24-hour period and average family income and food expenditures, 6 month intervals of participation in the Expanded Food and Nutrition Education Program through March 1970

Item	Homemakers reporting by food record number <u>1/</u>		
	1	2	3
	----- <u>Number</u> -----		
Homemakers reporting	215,453	90,682	27,479
	----- <u>Percent</u> -----		
Servings of food consumed			
Milk			
0	32.1	21.4	17.2
1 or more	67.9	78.6	82.8
2 or more	36.2	48.6	53.9
Meat			
0	5.4	3.7	2.7
1 or more	94.6	96.3	97.3
2 or more	75.0	80.1	84.5
Vegetables and fruit			
0	13.1	6.9	6.5
1 or more	86.9	93.1	93.5
4 or more	18.0	28.0	30.6
Breads and cereals			
0	3.3	1.9	1.2
1 or more	96.7	98.1	98.8
4 or more	35.7	44.8	50.2
1 or more, each food group	56.0	69.2	74.0
2 or more, milk and meat and 4 or more, vegetables/fruit and breads/cereals	9.0	15.6	19.4
	----- <u>Dollars</u> -----		
Family characteristics			
Average monthly income	234	241	236
Average monthly food expenditures ...	82	85	83

1/ Food records are combined by number, irrespective of date taken. Food record number one represents all initial food readings and records 2 and 3 reflect 6 and 12 months respectively of program participation. Food records are summarized and reported semiannually, March 31 and September 30, by each program unit.

in the Food Stamp and Donated Food Programs held at about 38 percent of the program families. However, during the current calendar year participation in USDA food programs has been rising; as of June 1970, 43 percent of the program families were participating. This rise appears to have been supported by increased availability of USDA food programs as well as more liberal purchase requirements for Food Stamps.

Since food readings of the family homemaker show only the number of times a food was eaten during a 24-hour period, certain limitations must be recognized in the interpretation and use of both individual records and summary data. Obviously, an exact measure of quantity consumed is not provided in the food recall, and in classifying an individual food, recognition is not given to variation in quality or nutrition value.

Despite these limitations, the individual food record, in context with other information on the family and observations based on the personal experience of the aide, provides a meaningful way of identifying poor nutrition practices and measuring change associated with the program educational effort. Summarized data highlight food consumption problems common among program families and provide a realistic measure of relative change in behavior.

One of the most interesting facts about food consumption of low-income families shown by available food-reading data is that over three-fourths of the homemakers on entering the program reported 2 servings or more of meat during the 24-hour recall period, and 85 percent of the homemakers who had been in the program a year consumed meat at this level. These findings would appear to indicate that protein inadequacy may be less widespread among low-income families than suspected.

Similarly, summary data would appear to indicate that the greatest dietary weakness of program families is in consumption of vegetables and fruits. Also, this appears to be an area where progress may be slow. While most homemakers even in the first reading reported consumption

of breads and cereals, only 36 percent reported 4 or more servings during the first 24-hour recall. Initial food readings indicated that about a third of the homemakers did not consume any milk products and only slightly over a third consumed the minimum recommended, 2 servings daily.

Overall assessment of change in food consumption practices of program family homemakers indicates that greatest progress has been made in getting families to include at least one serving from each of the food groups. But substantial progress had been made in increasing the incidence of "adequate" diets among participating families.

In evaluating the effectiveness of the program, particularly in respect to the proportion of homemakers with adequate diets, it should be recognized that the application of the education and skills gained from this program may be limited by the food purchasing power available to the families. Homemakers for which food readings were obtained between September 1969 and April 1970 reported average monthly income of \$242 with food expenditures accounting for 35 percent or \$84. On a weekly basis this would reflect an average food expenditure of \$19.43 per family.

The Department estimates that in June 1970 the cost of its low-cost food plan for a family of four with school children was \$31.10. Since the average size of a program family is 4.8 persons, available income, and specifically that available for food, places a definite restraint on these families in acquiring the food necessary for an adequate diet.

Marketing Implications

Data available from the information reporting system does not permit a direct assessment of the program's impact on marketing. However, the implications to marketing are significant since the importance of improved food buying both in respect to nutrition and price is being emphasized and program aides are working

with families to develop such skills. Progress in these areas is likely to be reflected in changed shopping patterns. This would be in respect to stores patronized and frequency of purchase, and buying patterns in respect to brands as well as products included in the shopping lists. For example, in some areas where the program involves a substantial proportion of the population food retailers have experienced a substantial increase in the sale of non-fat dried milk. Success in bringing about increased participation of eligible families in the Food Stamp

Program will have direct impact on food sales.

Thus, findings as to consumption practices of families participating in the program are of major significance to the food distribution industry. The data can identify areas where the consumer needs assistance in the marketplace and offer opportunities for the industry to complement the program by providing consumers with information and services which will help them meet their food needs at the lowest possible cost.

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