EXPENDITURES FOR PROCESSED FOODS

by Employee Food Services in Manufacturing Plants

Marketing Research Report No. 458

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PREFACE

This publication is the third in a group of reports by the Agricultural Marketing Service describing the use of food products in one segment of the "away-from-home" market. The reports deal with employee food services in manufacturing plants with 250 or more persons on their payrolls.

This report presents the major findings on the form in which foods were purchased. Special attention is given to expenditures for various services provided by marketing agencies that reduce the amount of kitchen preparation of food required by these institutional consumers.

It is to be expected that expenditures for food for these facilities have changed since the survey, and the wholesale prices of some foods have increased. But the proportion spent for major commodities, and even for different forms of them, probably has remained fairly constant.

This observation is based on two assumptions:

First, major changes in food preparation in mass feeding operations call for changes in equipment or labor, or both. Hence, an established pattern of food use usually is followed for some time.

Second, though some wholesale prices increased, others decreased. These changes between January 1956 and January 1960 would have increased expenditures by about 8 percent. A fair share of this increase was due to higher prices for beef, a high-preference item. It is quite unlikely, however, that shifts to other meats (which had changed little in price) would have reduced significantly the quantities of beef used.

It is reasonable to expect that managers of some of these facilities have considered purchasing more kinds of partially or wholly prepared foods. But it takes time to select from among available products those which can be adapted to institutional use. Hence, it is doubtful that large enough quantities of such products would have become regular purchases to change significantly the relative expenditures for major commodities, or for different forms of commodities, from those shown in this report.

The nationwide survey of inplant feeding facilities on which this report is based was the Department's first major attempt to evaluate the needs, demands, and marketing practices of mass feeding operations. The survey was a joint undertaking of the Marketing Economics Research Division and Market Development Research Division, as part of a broad program of research aimed at improving marketing efficiency and expanding markets for farm products. Funds for obtaining information on the use of fish and shellfish were provided by the Fish and Wildlife Service, U. S. Department of the Interior. Data were collected and processed by the Marketing Services Company, a division of Dun and Bradstreet, Inc., New York City, under contract with the Department of Agriculture.

Other Department publications based on this survey include: "Employee Food Services in Manufacturing Plants," Marketing Research Report No. 325, June 1959, and "Buying Practices and Food Use of Employee Food Services in Manufacturing Plants," Marketing Research Report No. 326, June 1959. The first of these two reports describes food services operated in factories and presents managements' appraisals of, and attitudes toward, these facilities. The second report summarizes the major characteristics of this market in terms of expenditures for, and quantities of, foods used during a 4-week period in January-February 1956. Tables present this information for individual foods and groups of foods.

Additional data collected during the survey, particularly those showing distributions of food quantities and expenditures for major commodities, are available upon request from the Marketing Economics Research Division, Agricultural Marketing Service, U. S. Department of Agriculture.

Manufacturing firms throughout the country cooperated in making available to the Department detailed records of the operation of their food services. Florence Gordon, of AMS, gave the author essential assistance in analyses of the data.

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HIGHLIGHTS

Almost all of the $20 million spent for food by employee food services in the manufacturing plants surveyed went for "processed" products. The food had been "serviced" or "processed" to some extent by marketing agencies--the firms that bring food from farmers to consumers. This was the case regardless of where plants were located--East or West, North or South--and regardless of how many people were employed, or of whether food services were managed by company personnel or by food service contractors.

These findings on expenditures for food are based on data collected by the U. S. Department of Agriculture in January-February 1956, from a nationwide sample of factories, each with at least 250 persons on its payrolls. "Expenditures," as defined for this report, refers to the money value of food used rather than actual dollars spent during the 4-week survey period.

About half the money spent for food by these industrial food services went for products with a limited amount of processing. This includes the sorting, trimming, washing, cutting, or boning of fresh products, especially eggs, vegetables, fruits, and meat. Other processes covered are pasteurizing, roasting (coffee), refining, and drying in the initial preparation of food for the market.

The remainder of the expenditures were divided among the three categories of the more highly processed forms: Single foods, mixtures of foods, and products quite different in character from ingredients used in their manufacture. Examples of these forms are: Canned peas, canned mixed vegetables, and bakers' cakes. More than 50 percent of the money spent for fish and shellfish, vegetables, fruits, fats and oils, and cereal products went for the more highly processed forms.

The importance of marketing services to these inplant facilities is illustrated by the fact that around 60 percent of the money spent went for foods that needed little additional preparation in institutional kitchens.

An examination of comparative costs of foods showed that the more highly processed foods were not necessarily the most expensive. Illustrations of these foods include evaporated and nonfat dry milk and dried eggs, which were cheaper per quart and dozen equivalent than the fresh forms.

These data also demonstrate that price is not always the dominant factor in purchase decisions. Though cheaper than the fresh forms, nonfat dry milk and dried eggs were used by only a small percentage of these plants.

If incomes remain high, total expenditures for food by employee facilities probably will increase. To a large degree, such an increase can be expected to parallel the building of new plants, particularly those employing 1,000 or more persons, and the expansion of existing factories. On the other hand, expenditures for marketing services may not increase significantly percentagewise, and may even decrease. About 10 percent of the money spent by these facilities went for foods such as meat and vegetables, that could have been more completely serviced by marketing agencies. Except for a shift to the marketing system of some of this remaining 10 percent, future increases in the use of marketing services may depend to a large degree on labor costs. If these increase, it is reasonable to expect that attempts will be made to offset them. To avoid raising meal prices, consideration undoubtedly will be given to labor-saving equipment and to greater use of prepared foods. For equipment to play a major role, there will have to be important innovations, as most kitchens appear to be fairly well equipped with the major kinds now on the market. New foods will have to be adaptable to institutional practices if they are to be used in large enough quantities to significantly increase expenditures, percentagewise.

On the other hand, adjustments for rising labor costs may be made by greater use of centralized commissaries which supply two or more outlets. If so, it is likely that more, rather than less, food preparation will be done in such commissaries. This could result in a smaller, rather than a larger, share of expenditures going for services provided by present marketing agencies.

INTRODUCTION

Since World War II, the marketing system has taken over more and more of the tasks involved in the preparation of food for the table. Between 1950 and 1958, for example, processing of farm products by factories rose 7 percent on a per capita basis. This was equivalent to an average increase of about 1 percent a year (8). Formerly, some of these jobs were done by farmers, and some were done by household and institutional consumers.

This shift in many responsibilities has generated widespread interest in the kind and relative importance of the various services purchased in this way. Marketing agencies--those responsible for getting food from the farmer to the consumer--have a general interest in how well these services are accepted. An individual agency is concerned with the market for the services it sells.

Farmers are interested in the amount of processing done by the marketing system, for processing is part of marketing costs. If these costs can be held down, there may be a possibility of a broader market for farm commodities.

Because of the continuing emphasis on "convenience" foods, consumers, too, are interested in the kind and amount of marketing services being provided. They want to know how much such services cost, and, to some extent, who buys them.

It is the purpose of this report to show the importance of such marketing services to one segment of the "away-from-home" market for food--employee food services in manufacturing plants. Included are data on (1) expenditures for commodities with varying amounts of processing, (2) an estimate of the extent of preparation still to be done in the institutional kitchens, and (3) observations on trends in the growth of this market in terms of additional food services and in their use of food processed by marketing agencies.

BACKGROUND OF STUDY

During this nationwide study of employee food services, information was collected on marketing practices and the use of food in manufacturing plants with 250 or more employees. Restricting the survey to these plants did not appear to limit the value of the data for examining food expenditures, as factories of this size employed 60 percent of the persons engaged in manufacturing.

To be included among those having a food service, a plant had to provide a facility (cafeteria, lunch counter, mobile canteen) that served regularly at least one hot food in addition to hot beverages. The presence of vending machines alone, even though hot foods were dispensed, did not qualify a plant as having a food service.

In brief, this survey showed that, nationwide, almost 6,000 plants, or about half of those with 250 or more employees, provided some kind of regular food service (4). 1/ Large plants (1,000 or more employees) were more likely than medium-sized (500-999 employees) or small plants (250-499 employees) to have food services.

Regionally, a larger share of the factories in the North Central States and the South provided such facilities than of those in the Northeast and West.

About a third of these food services were run by company personnel. Most of the rest were operated by food management contractors or concessionaires under some kind of contractual arrangement. Regardless of type of management--company- or contractor-operated--most facilities were subsidized to some extent by the firm. A large share were provided with equipment, space, or utilities free or at less than cost, or some combination of these. Some were subsidized by direct money contributions.

Almost all inplant facilities were open during the noontime and many were open during at least one other meal period; some were operated around the clock. Cafeterias were the most popular type.

During the 4-week survey period in January-February 1956, these facilities used food valued at nearly $20 million--about 3 percent of the wholesale value of food going to all away-from-home eating places (5). Expenditures for meat, dairy, and bakery products accounted for about 60 percent of the money spent; beverages took 12 percent, as did fruits and vegetables together. The remainder was about equally divided among poultry, fish and shellfish, eggs, fats and oils, and sugar and other sweets.

PROCEDURE

"Expenditures," as used in this report, refers to the money value of foods used rather than to the amount actually spent during the survey period. Because mass feeding facilities usually stock some foods, expenditure data based on usage seemed better for depicting practices of this market than purchases made during a short period of time.

Expenditures were derived by adding the cost of food used from supplies on hand at the start of the survey (estimated by using the last price paid) to expenditures for food purchased and used during the 4-week period.

"Processing," as used in this report, includes all work done by marketing agencies which reduces the amount of kitchen preparation of food required by institutional facilities. Most other kinds of services provided by the marketing system, such as the use of specialized storage facilities, are not considered.

1/ Underlined numbers in parentheses refer to items in Literature Cited, p. 54.

As a basis for assessing relative expenditures for marketing services, foods were grouped into the following four stages or levels, depending on the kind and extent of processing involved:

> The first stage or level includes the servicing or processing needed to prepare foods for sale, fresh, raw, or as originally milled or refined for first use. This covers such operations as trimming, washing, and sorting of fruits and vegetables; cutting meat carcasses into smaller units; milling flour; drying vegetables and fruits; refining sugar; roasting and grinding coffee; pasteurizing fluid milk and cream; and similar services. These operations represent minimum processing by the marketing system for consumer use. In similar analyses based on other data, foods included in this stage are referred to as "relatively unprocessed" or "unprocessed" (2).
>
> The second stage carries processing a step farther and includes canning, quick-freezing, and curing, and the manufacturing of foods such as butter, cheese, hydrogenated fats, macaroni, spaghetti, and noodles. This stage includes only the processing of individual foods.
>
> The third stage includes products that are mixtures of two or more individual foods, and those in which commodities have lost much of their original identity. Examples of such items are bakery products, flour mixes of all kinds, canned soups, canned and frozen mixtures, salad dressings, and ice cream.
>
> The fourth stage includes only hot meals, hot mixtures containing meats, and other main dish items, vegetables, salads, and sandwiches, prepared in off-premise kitchens and brought into plant premises and sold to employees directly from mobile canteens.

As might be expected, some foods to be included in one of the first three stages were difficult to classify. Decisions concerning the placement of these were based chiefly on whether a food was (a) the first form usable by the consumer (stage 1), (b) processed further as a single commodity (stage 2), or (c) a mixture of foods, or products that had lost most or all of their original identity (stage 3). 2/ (See table 1 for foods included in each stage of processing.)

2/ If different classifications are desired, these can be developed from basic expenditure data presented in tables 19-22, pp. 41-46.

Table 1.--Foods included in each of the 4 stages of processing 1/

Commodity	Stage of processing of products bought			
	First	Second	Third	Fourth 2/
Meat:	Fresh (including variety meats)	Canned Corned, dried Cured Frozen	Canned and frozen mixtures with meat Luncheon meats	Hot, ready-to-eat, sliced meat Hot mixtures with meat Meat sandwiches
Poultry:	Fresh	Canned Frozen	Canned and frozen mixtures with poultry	Hot, ready-to-eat poultry Hot mixtures with poultry Sandwiches
Eggs:	Fresh	Dried Frozen		
Fish and shellfish:	Fresh	Canned Dried Frozen Smoked	Canned mixtures with fish or shellfish	Hot, ready-to-eat mixtures with fish
Dairy products (excluding butter):	Fluid milk Cream	Condensed Evaporated Dry milk powder Cheese (natural)	Ice cream Ice cream mix Cheese, processed (including spreads)	Cheese sandwiches
Fats and oils (including butter):	Salad and cooking oils	Butter Margarine Shortening	Salad dressing	
Fruits and vegetables (including juices):	Dried Fresh	Canned Frozen Potato chips and sticks	Canned pork and beans Catsup Relishes	Hot, ready-to-eat vegetables, salads
Flour, cereals, and bakery products:	Flour Barley Cornmeal Hominy grits Rice	Macaroni Noodles Spaghetti Oatmeal	Flour mixes Cereals, ready-to-eat Canned macaroni, spaghetti, and rice products Bakery products	Hot, ready-to-eat macaroni, spaghetti, noodles, and rice dishes
Sugar and other sweets:	Sugar Molasses Honey and maple sirups	Corn sirups	Jellies and jams Toppings Candies	
Beverages (excluding milk):	Cocoa and chocolate Coffee Tea	Chocolate sirup Soft drinks	Alcoholic beverages	Hot chocolate
All other:	Nuts Seasoning	Peanut butter	Chiffon bases Leavening agents Soups and soup bases Sherbets, ices	Hot, ready-to-eat soups

1/ See p. 4 for definitions of different stages of processing. Foods included in each of these stages differ somewhat from classification used in (2).

2/ Prepared in off-premise kitchens, brought into plants, and sold directly from mobile canteens.

EXPENDITURES FOR PROCESSED FOODS

Nearly all the money spent for food by these inplant facilities went for items that had been processed to some extent by marketing agencies. Less than 1 percent was spent for food purchased directly from farmers.

Products with a minimum of processing (stage 1) represented the largest share of expenditures (fig. 1); more was spent for such foods than for those processed to stages 2 and 3 together.

Total expenditures for ready-to-serve foods (stage 4), prepared in off-premise kitchens, brought in hot and sold from mobile canteens, were relatively unimportant, accounting for only 2 percent of the money spent for all processed foods.

Regional patterns of expenditures for processed foods followed closely those shown for all plants (app. table 23, p. 47). But food services in small plants appeared to use more marketing services than those operated in large plants. Except for foods processed to stage 2, the share spent for the more highly processed foods increased progressively as the size of the plant decreased. However, further verification is needed, as differences shown by these data are too small to be significant.

It is probable that the uniformity in the share spent for stage 2 products was influenced by the fact that many of these foods are "staple" items. For example, canned vegetables and fruits, butter, and margarine are important in most consumers' purchases, whether household or institutional.

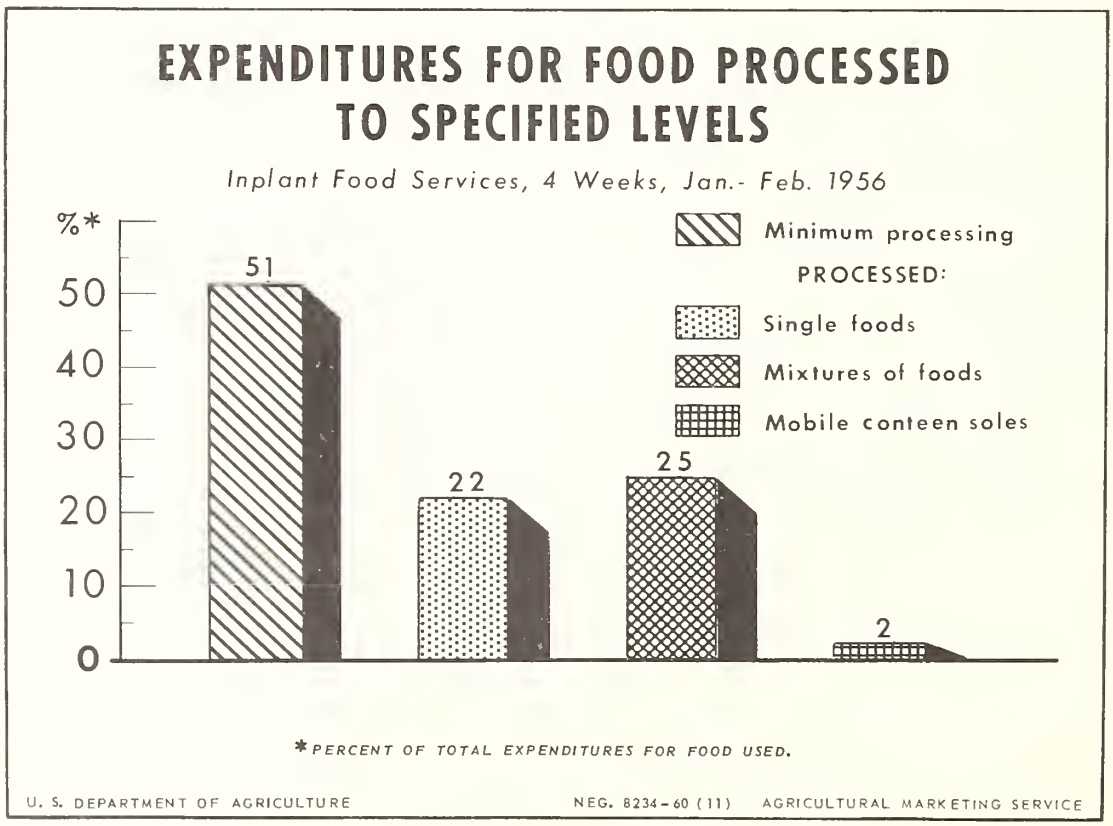

Figure 1

Such differences as are shown by size of plant in the share of expenditures going for the other levels of processed foods (stages 1, 3, and 4) were due chiefly to the fact that small plants spent proportionately more than large ones for products like cheese (processed), bakery products, and sugar, and for foods purchased from mobile canteens; and proportionately less for fresh meats, vegetables, and fruits.

Pasteurizing, roasting, and servicing such as washing, trimming, cutting, and boning were the most important procedures used on foods processed to a limited extent. As will be detailed later, food serviced in this manner accounted for 90 percent of the expenditures for "fresh" products (stage 1).

As shown in the following tabulation, baking and canning were the principal methods used for the more highly processed items; half of the money spent for foods included in stages 2, 3, and 4 went for items processed in this way.

Method of processing	Expenditures
	Percent
Baking	30
Canning	21
Quick freezing	8
Curing	6
Drying	1
All other 1/	34
	100

1/ Includes ice cream (7 percent); luncheon meat and prepared meat dishes (7 percent); soft drinks (6 percent); butter, margarine, shortenings, and salad dressings (4 percent); and smaller proportions spent for candy, cheese, and miscellaneous items.

The most important commodities processed by each of these methods are shown in the following tabulation (see also app. table 24, p. 47):

Baking:
- Bakery products

Canning:
- Vegetables
- Fruits
- Meat

Quick freezing:
- Meat
- Fish and shellfish
- Fruits
- Vegetables

Curing:
- Meat

Drying:
- Dairy products
- Meat

EXPENDITURES FOR MAJOR COMMODITIES WITHIN LEVELS OF PROCESSING

Stage 1.--Around $10 million was spent by these industrial food services during the survey period for foods that were cleaned, trimmed, sorted, cut up, or pasteurized. Of this amount, about a third went for fluid milk and cream, milk taking by far the largest share. Fresh meats represented a fourth, and most of this went for steaks, chops, small roasts, and similar items (table 2).

Because these industrial food services were large users of coffee (almost 9 out of every 10 plants allowed coffee breaks), expenditures for beverages ranked third among products with a limited amount of processing. This was almost twice the share spent for fresh fruits and vegetables.

Table 2.--Relative importance of expenditures for major groups of commodities within each of the 4 stages of processing, for food services in manufacturing plants with 250 or more employees, 4 weeks, January-February 1956

Commodity 1/	Stage of processing of products bought 2/			
	First	Second	Third	Fourth
	Percent	Percent	Percent	Percent
All processed food	100	100	100	100
Meat	25	28	9	74
Poultry	3	1	3/	1
Eggs	4	1	0	0
Fish and shellfish	2	7	3/	1
Dairy products (excluding butter)	34	5	14	3
Fats and oils (including butter)	3/	10	2	0
Fruits & vegetables (including juices)	9	33	3	4
Flour, cereals, and bakery products	2	2	60	4
Sugar and other sweets	3	3/	5	0
Beverages (excluding milk)	17	13	3/	1
All other	1	3/	7	12
Total expenditure (millions of dollars)	10.1	4.4	5.0	0.3

1/ See p. 5 for list of products included in each commodity group.
2/ See p. 4 for definitions of different stages of processing.
3/ Less than 0.05 percent.

Since data were collected in January, there could be some seasonal bias here. Hot drinks usually are more popular in cold than in hot weather. Hence, there could be an important shift in expenditures in the summer, as, for example, to an increased use of iced tea, fruit juices, and soft drinks. Fresh vegetables also are more plentiful in summer and fall than in midwinter. However, a big shift to fresh vegetables during periods of peak supplies would involve more preparation time on the part of employees. It is quite likely that, for mass feeding outlets such as these, the added time required by present food service employees, or the cost of additional labor, would limit seasonal shifts to fresh products.

Other expenditures for foods in stage 1 were of much less importance. The largest of these were for eggs.

Measured by expenditures, pasteurization was the prinicpal form of processing used for stage 1 products. This was followed by "service-type" operations--washing, trimming, sorting, cutting up, and boning. As will be shown later, the importance of each of these methods parallels closely the proportion spent for specific commodities; for example, pasteurization for milk and cream, and cutting up and boning for meat. The relative importance of these various methods, based on expenditures for products serviced in each way, is tabulated here:

Method of processing	Expenditures
	Percent
Pasteurizing	34
Cutting and boning	29
Roasting	16
Sorting, trimming, washing	12
Refining	3
Milling	2
Drying	2
All other 1/	2
	100

1/ Includes preparation of seasonings and shelling of nuts.

Stage 2.--Around $4.5 million, or a little more than a fifth of the total amount spent for food, went for products carried to the second stage of processing (table 2, p. 8). Of this amount, fruits and vegetables took a third, and meats around a fourth. Following these in importance were beverages, fats, fish and shellfish, and dairy products.

Of the commercial methods commonly associated with the term "processing"--canning, freezing, curing, and drying--canning was by far the most important among foods processed to stage 2. Expenditures for such products were more than twice those for quick-frozen foods, such freezing being the next most important method used (app. table 25, p. 48). As tabulated here, curing and drying followed, in that order.

Method of processing	Expenditures
	Percent
Canning	38
Quick freezing	17
Curing	10
Drying	6
All other 1/	29
	100

1/ Includes soft drinks, hydrogenated fats, butter and margarine, cheese (natural), potato chips and sticks, chocolate sirup, and less important items such as kippered fish and peanut butter.

Vegetables (including juices) were the principal kind of canned products used, accounting for 42 percent of the money spent for canned foods processed to this level as single commodities (app. table 26, p. 49). Fruits represented 27 percent; meat, poultry, and fish, together, 29 percent; and evaporated and condensed milk, the remaining 2 percent.

Stage 3.--Foods processed to the third stage accounted for about $5 million, or a fourth of the money spent for food used by these inplant facilities. Bakery products represented more than half of the money spent for stage 3 items. Dairy products (excluding butter)--chiefly ice cream--followed in importance.

As might be expected, the proportionally high expenditures for bakery products made "baking" the principal method used to process foods to this stage. Other methods used, including canning and quick freezing, were of considerably less importance, as shown in the following tabulation:

Method of processing	Expenditures
	Percent
Baking	59
Quick freezing (mixtures of foods)	13
Canning (mixtures of foods)	10
All other 1/	18
	100

1/ Includes fresh luncheon meat, processed cheese (including spreads), flour mixes, ready-to-eat cereals, salad dressings, and candies.

Stage 4.--Only about $300,000, or 2 percent of the money spent for all serviced and processed foods, went for products carried to stage 4. Included among these were dishes like fresh clam chowder and vegetable soup; beef stew and chicken a la king; hamburger, corned beef, and cheese sandwiches; and assorted kinds of salads.

If stage 4 had not been developed specifically for this report, these products, which are largely complex mixtures of food and ready-to-serve dishes, would have been included in stage 3. If this had been done, total expenditures for stages 3 and 4 would have amounted to $5.3 million and would have been apportioned among the major commodities as follows:

Commodity	Expenditures
	Percent
Flour, cereals, and bakery products	57
Dairy products	14
Meat	13
Sweets other than sugar	4
Fruits and vegetables	3
Salad dressings	1
All other 1/	8
	100

1/ Includes expenditures for poultry, fish, beverages, soups, and miscellaneous items.

In addition to food brought in on mobile canteens, foods prepared off-premise also were sold through vending machines. Though most plants had vending machines, relatively few of these dispensed items like sandwiches, hot soup, pastry, or cake. On the other hand, soft drinks, candy, and peanuts were vended in a large share of the plants.

The tabulation shows the proportion of plants with food-serving facilities having vending machines supplying the various items:

Item	Percentage of plants
Soft drinks	90
Candy, peanuts, or gum	81
Coffee	39
Milk	25
Cookies	19
Ice cream	18
Hot chocolate	8
Fruit juices	5
Sandwiches	2
Pastry, cake	2
Soup	2
Fruit	1

LEVELS OF PROCESSING OF MAJOR COMMODITIES

Marked differences were apparent in the levels of marketing services "purchased" with various commodities. For some commodities, almost 90 percent of the money was spent for products with a limited amount of added marketing services, while for others, an equally large share was spent for the more highly processed forms.

Table 3.--Share of expenditures for major groups of commodities with specified stages of processing, for food services in manufacturing plants with 250 or more employees, 4 weeks, January-February 1956

Commodity	Total expenditure 1/	Stage of processing of products bought 2/			
		First	Second	Third	Fourth
	Mil. dol.	Percent	Percent	Percent	Percent
Meat	4.5	57	27	10	6
Poultry	.4	85	13	1	1
Eggs	.5	89	11	0	0
Fish and shellfish	.5	32	67	3/	1
Dairy products (excluding butter)	4.4	78	5	17	3/
Fats and oils (including butter)	.5	7	78	15	0
Fruits & vegetables (incl. juices)	2.4	36	58	5	1
Flour, cereals, & bakery products	3.3	5	2	93	3/
Sugar and other sweets	.5	52	3	45	0
Beverages (excluding milk)	2.3	76	24	3/	3/
All other 4/	.5	24	1	68	7

1/ Due to the classification used for foods, these expenditure totals differ somewhat from those given in table 4, p. 9, MRR 326. 2/ See p.4 for definitions of different stages of processing. 3/ Less than 0.05 percent. 4/ See p.5 for list of products included in this group.

This was the case for eggs, which were purchased chiefly as shell eggs (stage 1), and bakery products, which, of course, were completely processed (stage 3). Because of this variation, each of the major commodities is discussed separately.

Meat

Nearly 60 percent of the money spent for meat by the industrial food services went for "fresh" products. Of this amount, only about a sixth was spent for carcass meat or primal cuts (app. table 27, p. 50), the remainder going for retail cuts, some of which were ordered according to specified serving weights (portion size).

Table 4.--Relative expenditures for meat processed to specified stages

Characteristics of plants	Stage of processing of products bought 1/			
	First	Second	Third	Fourth
	Percent	Percent	Percent	Percent
All plants	57	27	10	6
Region:				
Northeast	53	28	13	6
North Central	58	29	9	4
South	60	23	9	8
West	61	28	7	4
Employee size group:				
250 - 499	52	28	10	10
500 - 999	58	25	11	6
1,000 or more	58	28	10	4
Form of operation:				
Company-operated	62	25	9	4
Contractor-operated	54	29	11	6

1/ See p. 4 for definitions of different stages of processing.

Meats fabricated as roasts, many of which were boneless, represented the largest share of the expenditures for retail cuts. Cubed and ground meat followed in importance, expenditures for ground meat being about twice those for cubed meat, as shown in the following tabulation:

Retail cuts	Expenditures
	Percent
Roasts	38
Cubed and ground	22
Portion-sized	18
Steaks and chops	12
Miscellaneous 1/	10
	100

1/ Includes bacon, salt pork, spareribs, ham hocks, and similar items.

It is quite likely that an important reason for the extensive use of retail cuts was the lack of meat-cutting facilities. Only about a fifth of the food services reported having even as much as a butcher's block--the minimum requirement for meat-cutting facilities as defined for this survey (4). This lack of facilities may have been influenced by the relatively high wages of meat cutters as compared with wages of most culinary workers, an inadequate volume of work to use these skilled workers efficiently, and by union rules that may not permit employees to be shifted to other kinds of jobs as needed.

One study of the relative wages paid to food service workers in mass feeding establishments showed that meat cutters averaged about 20 percent more per hour than bakers, the next highest paid employees (1). Even greater differences existed when wages paid to meat cutters were compared with those of the head cook or the kitchen helper, for example. Hence, if a food service is not large enough to keep a meat cutter fully employed, it may be less expensive to have wholesale suppliers fabricate meat according to institutional specifications into small units--steaks, chops, and small roasts.

The bulk of the money spent for meats processed to stage 2 went for cured, canned, and quick-frozen products, in that order of importance. The cured meat was chiefly pork, nearly three-fourths of these expenditures going for smoked ham; bacon and salt pork added another 20 percent. Canned meats consisted principally of hams and picnics. Portion-sized meats represented a large share of the expenditures for frozen items. As tabulated here, dried products (mostly dried beef) accounted for the smallest share of money spent for meat processed to stage 2:

Method of processing	Expenditures
	Percent
Cured	37
Canned	28
Frozen	25
Dried	10
	100

Poultry

Considering the significant changes in recent years in the production and marketing of poultry, it is not surprising that a major share of the expenditure for poultry was for fresh items. Of the money spent for fresh products 60 percent went for chicken, primarily for ready-to-cook broilers, fryers, and roasters. Only 13 percent of stage 1 expenditures went for stewing chickens (now largely a byproduct of farm egg enterprises).

Selected parts--legs, thighs, breasts, and wings--which probably represent the ultimate in the servicing of fresh poultry, were relatively unimportant. Few plants (8 percent) purchased these items, and their total expenditures for them in the 4-week period studied were less than $25,000.

On the average, products processed to the second stage took 13 percent of the poultry dollar. These expenditures did show some small variations from one section of the country to another, food services in the North Central and Western regions spending the largest proportion for poultry processed to this level. In general, this was due to differences in the relative importance of frozen items.

Products processed to stages 3 and 4, together, represented only 2 percent of the money spent for poultry. Most important among these were canned and frozen mixtures

(stage 3); for example, canned chicken a la king and frozen chicken pie. Included in stage 4 were such ready-to-serve items as freshly baked chicken loaf and chicken pie, chicken salad, and sandwiches.

Eggs

A larger share of the expenditures for eggs than of those for any other major type of commodity went for products sold "fresh." Almost 90 cents out of each dollar going for eggs went for shell eggs that had been graded and sorted for size.

By contrast, relatively little was spent for, and comparatively few plants (10 percent) used, the processed forms--frozen and dried eggs. Though a larger share was spent for frozen than for dried eggs, as shown in the following tabulation, there was little difference in the quantities used, in terms of dozens of whole eggs.

Method of processing	Expenditures	Quantities used (Dozens, whole-egg equivalent)
	Percent	Percent
Frozen	89	54
Dried	11	46
	100	100

The following shows the average amount spent for frozen and dried eggs, per plant using these items during the 4-week survey period:

Characteristics of plants	Expenditure per plant using--	
	Frozen eggs	Dried eggs
	Dollars	Dollars
All plants	106	25
Region:		
Northeast	42	6
North Central	104	6
South	124	46
West	200	17
Employee size group:		
250 - 499	10	1/
500 - 999	11	13
1,000 or more	125	33
Form of operation:		
Company-operated	142	9
Contractor-operated	87	32

1/ Less than 0.50 dollar.

Table 5.--Relative expenditures for poultry processed to specified stages

Characteristics of plants	Stage of processing of products bought 1/			
	First	Second	Third	Fourth
	Percent	Percent	Percent	Percent
All plants	85	13	1	1
Region:				
Northeast	89	9	2/	2
North Central	79	20	2/	1
South	90	9	1	2/
West	78	21	1	2/
Employee size group:				
250 - 499	76	21	2	1
500 - 999	87	11	1	1
1,000 or more	86	13	2/	1
Form of operation:				
Company-operated	84	14	2/	2
Contractor-operated	86	13	1	2/

1/ See p.4 for definitions of different stages of processing.
2/ Less than 0.05 percent.

Table 6.--Relative expenditures for eggs processed to specified stages

Characteristics of plants	Stage of processing of products bought 1/			
	First	Second	Third	Fourth
	Percent	Percent	Percent	Percent
All plants	89	11	0	0
Region:				
Northeast	98	2	0	0
North Central	90	10	0	0
South	81	19	0	0
West	82	18	0	0
Employee size group:				
250 - 499	99	1	0	0
500 - 999	98	2	0	0
1,000 or more	86	14	0	0
Form of operation:				
Company-operated	91	9	0	0
Contractor-operated	88	12	0	0

1/ See p.4 for definitions of different stages of processing.

Fish and Shellfish

Two-thirds of the $500,000 spent for fish and shellfish during the survey period went for the more highly processed forms--canned and frozen products. This was in contrast to meat and poultry, often used similarly in meals, where the largest share went for fresh items.

Table 7.--Relative expenditures for fish and shellfish processed to specified stages

Characteristics of plants	Stage of processing of products bought 1/			
	First	Second	Third	Fourth
	Percent	Percent	Percent	Percent
All plants	32	67	2/	1
Region:				
Northeast	38	61	2/	1
North Central	28	71	2/	1
South	32	66	1	1
West	25	75	2/	2/
Employee size group:				
250 - 499	23	75	1	1
500 - 999	28	71	2/	1
1,000 or more	35	64	2/	1
Form of operation:				
Company-operated	32	67	2/	1
Contractor-operated	32	67	1	2/

1/ See p.4 for definitions of different stages of processing.
2/ Less than 0.05 percent.

Small differences by size of plant and by region were observed in the shares of total expenditures that went for fresh and processed fish and shellfish. Essentially, this was a tendency for large plants (1,000 or more employees) to spend proportionately more than small ones (250-499 employees) for fresh products. Among the four regions, the only difference of importance was between plants in the Northeast and West. Factories in the Northeast tended to spend a larger share for fresh products than those in the West.

By contrast, there was considerable difference in expenditures for the various forms of fish as compared with those for shellfish. Of these two commodities, fish accounted for more than two-thirds of the money spent. Among regions, the proportion spent for fish ranged from 60 percent in the Northeast and South to 79 percent in the North Central region. Though differences by plant size were not significant, large plants tended to spend proportionately less for fish than small factories--66 percent compared with 74 percent, respectively.

On the average, only about a fourth of the money spent for fish went for fresh products, all of which were cleaned or dressed, and around half purchased as steaks and fillets.

By contrast, shellfish purchases were more evenly distributed between fresh (44 percent) and processed forms (56 percent); about a fourth of the fresh items were purchased "in the shell."

Expenditures for canned and frozen fish (stage 2) were about equally divided, but, as shown in the following tabulation, almost three times as much was spent for frozen as for canned shellfish products:

Method of processing	Fish	Shellfish
	Percent	Percent
Canned	47	27
Frozen	53	73
	100	100

Both fish and shellfish products processed beyond stage 2 were relatively unimportant. All of these were brought in on mobile canteens; they included such items as soups, "made dishes," and sandwiches. In total, these represented only 1 percent of the expenditures for all fish and shellfish items.

Dairy Products (Excluding Butter)

Of the $4.4 million spent for dairy products (excluding butter), more than three-fourths went for fresh products (stage 1). As might be expected, pasteurized fluid whole milk constituted the largest share of these purchases; cream accounted for only about an eighth.

Table 8.--Relative expenditures for dairy products (excluding butter) processed to specified stages

Characteristics of plants	Stage of processing of products bought 1/			
	First	Second	Third	Fourth
	Percent	Percent	Percent	Percent
All plants	78	5	17	2/
Region:				
Northeast	77	4	19	2/
North Central	80	5	15	2/
South	79	6	14	1
West	64	9	27	2/
Employee size group:				
250 - 499	74	5	21	2/
500 - 999	73	5	22	2/
1,000 or more	80	5	15	2/
Form of operation:				
Company-operated	71	7	22	2/
Contractor-operated	82	4	14	2/

1/ See p.4 for definitions of different stages of processing.
2/ Less than 0.05 percent.

Stage 2 products were relatively unimportant; they represented only 5 percent of these expenditures, and around half of this went for unprocessed cheese. Dry milk products took another third and evaporated milk a sixth.

Stage 3 products accounted for around a sixth of the money going for dairy products (excluding butter). Of this, 80 percent went for ice cream, with processed cheese next (15 percent).

The widespread use of commercially made ice cream is another illustration of the reliance these industrial facilities placed on services furnished by the marketing system. Nearly 85 percent of the plants purchased ice cream during the survey period while, by contrast, only 2 percent reported having facilities for making ice cream.

Fats and Oils (Including Butter)

Most of the fats and oils purchased were processed beyond stage 1. Only salad and cooking oils represented the minimum of processing, and these products accounted for only a small share of the half million dollars spent for all fats and oils (including butter).

Table 9.--Relative expenditures for fats and oils (including butter) processed to specified stages

Characteristics of plants	Stage of processing of products bought 1/			
	First	Second	Third	Fourth
	Percent	Percent	Percent	Percent
All plants	7	78	15	0
Region:				
Northeast	4	82	14	0
North Central	4	82	14	0
South	14	71	15	0
West	10	72	18	0
Employee size group:				
250 - 499	5	79	16	0
500 - 999	8	75	17	0
1,000 or more	7	79	14	0
Form of operation:				
Company-operated	7	79	14	0
Contractor-operated	7	78	15	0

1/ See p. 4 for definitions of different stages of processing.

As might be expected, stage 2 products, which included staple items like butter, margarine, and shortenings, made up the bulk of the processed items purchased in this category. Butter accounted for slightly more than half of these expenditures, shortenings for a third, and margarine for about a sixth.

A notable trend in the use of marketing services in connection with fats and oils is shown by the extent to which commercially prepared salad dressings (stage 3) were

purchased. These were bought by 80 percent of the inplant food services, although, at one time, these products, particularly of the French and starch-base types, were produced in many institutional kitchens. When power mixers became available, frequently mayonnaise was made also.

It seems reasonable to expect that large plants would be more likely than small ones to have power mixers and consider it advantageous to make their own salad dressings. But, even among these establishments, 9 out of 10 used commercially prepared salad dressings during the survey period. Mayonnaise and mayonnaise-type items were purchased and used by 38 percent of the large food services, French and French-type by 41 percent, and starch-base dressings by 60 percent.

Fruits and Vegetables (Including Juices)

Expenditures for fruits and vegetables during the survey period totaled around $2.4 million, or about 12 percent of the amount spent for all food. Of this, approximately twice as much went for vegetables as for fruits. As the proportion of money spent for these products with various levels of processing differed considerably, each commodity group is discussed separately.

Vegetables (Including Potatoes and Juices)

Most of the money spent for vegetables went for items processed only through stage 2. Few mixtures of vegetables, either canned or frozen, were purchased (stage 3), and vegetables were relatively unimportant among foods brought in on mobile canteens (stage 4). As a result, products processed to these latter two stages, together, accounted for only a small part of the total expenditures for vegetables.

Table 10.--Relative expenditures for vegetables (including juices) processed to specified stages

Characteristics of plants	Stage of processing of products bought 1/			
	First	Second	Third	Fourth
	Percent	Percent	Percent	Percent
All plants	41	51	7	1
Region:				
Northeast	38	52	8	2
North Central	42	50	8	2/
South	42	51	7	2/
West	44	49	6	1
Employee size group:				
250 - 499	34	57	8	1
500 - 999	38	53	9	2/
1,000 or more	42	50	7	1
Form of operation:				
Company-operated	37	54	8	1
Contractor-operated	44	48	7	1

1/ See p. 4 for definitions of different stages of processing.
2/ Less than 0.05 percent.

Though there was not much difference in the share spent for vegetables processed to stage 1 (fresh and dried) and stage 2 (canned and frozen), the more highly processed items held an edge. This was true also for the different regions of the country. On the other hand, there was some tendency for small plants to spend a larger proportion of their vegetable dollar for the more highly processed forms than did food services in plants with 1,000 or more employees. Differences shown by these data are too small to be considered significant.

Around three-fourths of the money spent for fresh vegetables (stage 1) during this winter period went for only 5 commodities--potatoes (white), tomatoes, lettuce, onions (mature), and cabbage, in that order of importance.

Among expenditures for stage 2 products, canned items were by far the most important. As tabulated here, these accounted for nearly 80 percent of the money spent for vegetables processed to this level:

Method of processing	Expenditures
	Percent
Canned	78
Frozen	9
Other	13
	100

The bulk of the expenditure for canned products (83 percent) was for vegetables other than potatoes and juices. Half the money spent for canned vegetables (excluding potatoes and juices) went for five commodities--tomatoes, snap beans, green peas, corn, and spinach, in that order of importance. Among these, however, nearly twice as much was spent for tomato products as for snap beans, the second highest in average dollar expenditures per plant.

Money spent for frozen products, likewise, went largely for vegetables other than potatoes. Nearly 60 percent of this was spent for five commodities--green peas, lima beans, snap beans, broccoli, and mixed vegetables.

Processed items included in the "other" category consisted of potato chips and sticks (59 percent), prepeeled white potatoes (40 percent), and instant potatoes (1 percent). Expenditures for chips and sticks alone averaged nearly as much, per plant, as was spent for all the quick-frozen vegetables.

Nearly a fifth of the money spent by these facilities for fresh white potatoes was for potatoes prepeeled by marketing agencies. And, though only 8 percent of the plants bought this product, those that did purchased large quantities. For example, during the 4-week period, plants purchasing prepeeled potatoes used quantities ranging from 1,000 to 1,700 pounds per plant. Small plants using this product averaged 1,250 pounds per plant.

Expenditures for various forms of individual vegetables are shown in table 11. Even discounting possible seasonal bias, there are important differences among these. For example, more than four-fifths of the expenditures for snap beans went for the canned product and only one-tenth for the frozen; while those for lima beans were divided about equally between canned and frozen products.

Table 11.--Proportion of expenditures for selected vegetables (excluding juices) going for different forms, for food services in manufacturing plants with 250 or more employees, 4 weeks, January-February 1956

Commodity	Form purchased				Total expenditures
	Fresh	Frozen	Canned	Other	
	Percent	Percent	Percent	Percent	Percent
Potatoes, white	74	1	4	1/ 21	100
Carrots	50	0	50	0	100
Green peas	0	20	80	0	100
Lima beans	0	45	55	0	100
Snap beans	8	10	82	0	100
Spinach	7	22	71	0	100
Tomatoes	43	0	57	0	100

1/ Chiefly potato chips and sticks.

Fruits (Including Juices)

By far the largest proportion of the fruit dollar went for processed items. On the average, these forms (stage 2) accounted for three times the amount spent for fresh and dried (stage 1) products.

Western plants deviated from this practice somewhat. In that region, fresh and dried fruit items were relatively more important compared with more highly processed forms, and the ratio of expenditures was closer to 2 to 1 in favor of stage 2 products.

Table 12.--Relative expenditures for fruits (including juices) processed to specified stages

Characteristics of plants	Stage of processing of products bought 1/			
	First	Second	Third	Fourth
	Percent	Percent	Percent	Percent
All plants	24	76	0	2/
Region:				
Northeast	17	82	0	1
North Central	24	76	0	2/
South	27	73	0	2/
West	35	65	0	2/
Employee size group:				
250 - 499	20	80	0	2/
500 - 999	16	84	0	2/
1,000 or more	26	74	0	2/
Form of operation:				
Company-operated	21	79	0	2/
Contractor-operated	26	74	0	2/

1/ See p.4 for definitions of different stages of processing.
2/ Less than 0.05 percent.

In general, fruit purchases did not represent one of the major expenditures of these facilities during this winter month, as they accounted for less than 4 percent of the food dollar. This may be explained, in part, by some of the practices of these food services. For example, fruits are used to a large extent for breakfast, in desserts, and in salads. Hence, with less than half of the facilities serving breakfast and with more than half buying all their baked products, including fruit pies, expenditures for fruits would be curtailed.

Fresh fruits accounted for most of the expenditures for stage 1 products; dried fruits represented only a little more than 10 percent. And, though around 60 percent of the facilities bought fresh fruits and 40 percent used dried fruits, purchases were restricted to a relatively few kinds. Expenditures for fresh fruits were confined largely to apples, lemons, bananas, oranges, and grapefruit, in that order of importance. Three times as much was spent for apples as for lemons, the next most important in terms of money spent.

Stage 2 products include canned and frozen fruits and juices. And, as tabulated here, canned items were by far the most important, both in terms of expenditures and in the share of plants purchasing these products:

Method of processing	Expenditures	Plants using
	Percent	Percent
Canned:		
Fruits	65	78
Juices	17	63
Frozen:		
Fruits	14	19
Juices	4	17

Approximately four times as much was spent for canned as for quick-frozen products, and this held true from region to region. On the other hand, there was a significant difference by size of plant; as shown in the following tabulation, the share spent for canned fruits tended to decrease as the size of the plant increased:

Employees in plant	Expenditures for--	
	Canned	Frozen
Number	Percent	Percent
250 - 499	96	4
500 - 999	87	13
1,000 or more	78	22

In the main, these differences resulted from larger expenditures for canned fruit juices by small plants and for frozen fruits by the large plants (app. table 28, p. 51).

As was the case with fresh and dried fruits, most of the expenditures for canned and frozen items were restricted to a few kinds. Nearly three-fourths of the money spent for canned products went for five kinds of fruit--peaches, pineapple, apples (including apple sauce), fruit cocktail, and pears, in that order of importance.

Expenditures for frozen fruits were even more restricted, as around 70 percent of the money spent for these products went for three items--berries, apples, and sour cherries.

Nearly 80 percent of the expenditures for fruit juices also went for canned items, most of which were single strength. For all forms, more was spent for citrus juices than for all other kinds together.

As is the case with vegetables, there were some important differences in the use of various forms of individual fruits. For example, considering only those that were purchased in more than one form, it is apparent from table 13, that expenditures for frozen berries and sour cherries were significantly greater than for the same products canned. As these fruits are used to a large extent in baking, it appears that the food services included in this survey exhibited some preference for the frozen form for this use.

Table 13.--Proportion of expenditures for selected fruits (excluding juices) going for different forms, for food services in manufacturing plants with 250 or more employees, 4 weeks, January-February 1956

Commodity	Total expenditures	Form purchased		
		Fresh	Frozen	Canned
	1,000 dol.	Percent	Percent	Percent
Apples	112.8	43	18	39
Berries, assorted	40.2	1/	67	33
Cherries, sour	18.1	0	59	41
Grapefruit	23.8	48	0	2/ 52
Oranges	20.4	65	0	3/ 35

1/ Less than 0.05 percent.
2/ Includes half the expenditures for canned grapefruit and orange sections.
3/ Includes half the expenditures for canned grapefruit and orange sections and those for canned mandarin oranges.

Flour, Cereals, and Bakery Products

The extent to which processing has been transferred to marketing agencies is amply demonstrated by the group of commodities comprising flour, cereals, and bakery products. Of the $3.3 million spent for these products, around 90 percent went for items that were ready to serve without further preparation.

Stage 1 products include flour, ground meals, and whole grain cereals. Of the money spent for these products, flour took about two-thirds, rice nearly 15 percent, and cornmeal, grits, and hominy together about 10 percent. The remainder was made up of small amounts going for barley, cornstarch, and tapioca.

Purchases of macaroni, spaghetti, and noodles accounted for most (95 percent) of the money spent for stage 2 products. Bakery products made up 98 percent of the expenditures for stage 3 products. Of these, bread represented only about 15 percent and the rest went for other commercially baked items, particularly for pies, cakes, doughnuts, and rolls of various kinds. Flour mixes accounted for only 2 percent of these expenditures.

Bakery products provide an illustration of the amount these facilities spent for various components of a product, compared with the expenditures for the same end product commercially made. For example, of the average amount spent per plant for

cake flour, cake mixes, and bakers' cakes, 85 percent went for commercially baked cakes, 9 percent for cake flour, and 6 percent for cake mixes. Though unit costs vary, and, of course, cake contains ingredients other than flour, these facilities still appeared willing to buy the services provided by commercial bakeries.

Table 14.--Relative expenditures for flour, cereals, and bakery products processed to specified stages

Characteristics of plants	Stage of processing of products bought 1/			
	First	Second	Third	Fourth
	Percent	Percent	Percent	Percent
All plants	5	2	93	2/
Region:				
Northeast	4	2	94	2/
North Central	4	2	94	2/
South	9	2	89	2/
West	7	2	89	2
Employee size group:				
250 - 499	3	2	95	2/
500 - 999	4	2	94	2/
1,000 or more	6	2	92	2/
Form of operation:				
Company-operated	5	2	92	1
Contractor-operated	5	2	93	2/

1/ See p. 4 for definitions of different stages of processing.
2/ Less than 0.05 percent.

Further evidence of the importance of these marketing services is shown both by data on percentage of plants buying, and by the share of plants baking products regularly on their premises:

Item	Baked product regularly	Bought product during survey period 1/
	Percent	Percent
Cakes	32	52
Pies	30	71
Rolls	17	71
Cookies	16	28
Doughnuts	4	59

1/ Purchased product at least once during survey period. Actually, most of these plants purchased these items regularly.

Nearly 60 percent of the managers of these facilities reported that no baked goods were produced regularly in their kitchens.

Beverages (Excluding Milk)

Beverages (excluding milk, which is treated in another category) were important in expenditures of the industrial food services. In total, they accounted for more than 2 million dollars, or 12 percent of the food dollar. This was the same share as was spent for fruits and vegetables together.

Expenditures for beverages of different levels of processing are influenced mainly by the use of two commodities, coffee and soft drinks, both of which were used in large quantities.

Coffee was the principal beverage purchased. Because roasting was considered a stage 1 process, this accounts for the proportionally large amount spent for items processed to this level. Soft drinks represented nearly all the expenditures for stage 2 products.

As mentioned earlier (p. 11), beverages also were sold through vending machines. Soft drinks were the most important items sold through machines, being vended in 9 out of 10 plants, compared with about 4 out of 10 vending coffee. Southern plants spent from 4 to 5 times as much for soft drinks as those in other regions. Though other studies have shown that soft drinks are popular in the South, there is evidence that regional differences may not be as great as these data indicate, since expenditures in the South were weighted somewhat by unusually large purchases by a few big factories. In addition, there was some variation among individual plants in all areas in the proportion of soft drinks vended as compared with those purchased and sold by food service managements.

Table 15.--Relative expenditures for beverages (excluding milk) processed to specified stages

Characteristics of plants	Stage of processing of products bought 1/			
	First	Second	Third	Fourth
	Percent	Percent	Percent	Percent
All plants	76	24	2/	2/
Region:				
Northeast	83	16	1	2/
North Central	87	13	2/	2/
South	54	46	2/	2/
West	83	16	1	2/
Employee size group:				
250 - 499	70	30	2/	2/
500 - 999	66	34	2/	2/
1,000 or more	80	20	2/	2/
Form of operation:				
Company-operated	76	24	2/	2/
Contractor-operated	76	24	2/	2/

1/ See p. 4 for definitions of different stages of processing.
2/ Less than 0.05 percent.

Miscellaneous Foods

Among the remaining kinds of foods purchased by these inplant facilities, only soups and soup bases and sugar and other sweets were of much importance. Of these, commercially prepared soups represent another of the more recent marketing services used in fairly large quantities.

Soups and Soup Bases

At least three-fourths of these food services purchased commercially-prepared soups and soup bases during the 4-week survey period, and they used, on the average, about 200 pounds per plant. This amounted to a total expenditure by all plants of almost a quarter of a million dollars. Even among large plants that might be expected to prepare soups in their own kitchens, a large share purchased commercially canned, ready-to-serve, and condensed soups, and nearly 60 percent bought soup bases. Expenditures for the various kinds of soups and soup bases were apportioned as follows:

Method of processing	Expenditures
	Percent
Canned soup:	
Vegetable	37
Meat, poultry, fish	27
Soup bases	19
Soup prepared in off-premise kitchens	14
Dry soup mixes	3
Frozen soup	1/
	100

1/ Less than 0.05 percent.

Among the canned products, about twice as much was spent for condensed as for ready-to-serve soups. This was true for all kinds--vegetable, meat, poultry, and fish soups.

As shown in the appendix, table 29, p. 51, there were differences by size of plant in the kinds and forms of soup used. In general, this was due to the greater importance of soup bases in purchases of large plants (1,000 or more employees). Offsetting this, small and medium-sized plants spent proportionally more for canned condensed soup. Dry soup mixes and frozen soups were relatively unimportant, regardless of size of plant.

Sugar and Other Sweets

Around half a million dollars was spent for sugar and other sweets during the survey period, and this was about equally divided between items processed to stages 1 and 3. Sugar accounted for 98 percent of the money going for stage 1 products; the remaining 2 percent went for molasses, honey, and maple sirup.

Candies made up the bulk of the expenditures for stage 3 items. Around a third of the plants purchased these products for resale to employees. This was in addition to items sold through vending machines in about 8 out of 10 plants.

Table 16.--Relative expenditures for sugar and other sweets processed to specified stages

Characteristics of plants	Stage of processing of products bought 1/			
	First	Second	Third	Fourth
	Percent	Percent	Percent	Percent
All plants	52	3	45	0
Region:				
Northeast	54	3	43	0
North Central	52	3	45	0
South	46	4	50	0
West	67	5	28	0
Employee size group:				
250 - 499	48	1	51	0
500 - 999	41	2	57	0
1,000 or more	55	4	41	0
Form of operation:				
Company-operated	53	4	43	0
Contractor-operated	51	3	46	0

1/ See p. 4 for definitions of different stages of processing.

Toppings for ice cream accounted for a fifth of the expenditures for stage 3 products, and marmalades, jellies, and jams for less than 10 percent. Undoubtedly, the relatively low expenditures for the latter products were influenced by their importance as a breakfast item. About 40 percent of the plants purchased jellies and jams; 46 percent served a morning meal.

COMPARISON OF PRICES PAID FOR SELECTED PROCESSED FOODS

The increasing importance of marketing services in recent years has carried with it a strong inference that a direct relationship exists between the extent of processing and price--the more highly a food is processed, the higher the price. This is true in some cases, but not to the degree often inferred, for there are many highly processed foods that are cheaper than unprocessed forms.

This impression may stem from a tendency to identify marketing services with the so-called "convenience" foods. And, further, to identify "convenience" foods with newer items, as, for example, frozen products like French fried potatoes, chicken pot pie, and dinners. Yet these represent only a small share of the processed or serviced foods now on the market. When a food becomes a regular item on the grocery order, the extent to which it has been processed is often overlooked. By contrast, the same, or even a smaller, amount of processing "purchased" with a new product tends to be overemphasized. Bread is seldom mentioned as a convenience food, yet it is ready to serve and, today, most of that used is commercially baked. If the term convenience were applied to all partially or wholly prepared foods, a large share of the products now on the market would fall in this category.

Prices paid by these inplant facilities for different forms of milk illustrate that the more highly processed forms are not always the most expensive. As tabulated here, the price of fresh fluid milk was higher per quart equivalent than prices for evaporated milk and dried milk powders:

Form	Price per quart equivalent
	Cents
Fresh, fluid whole milk	21.9
Evaporated milk	13.7
Whole dry milk	10.0
Nonfat dry milk	5.0

Again, dried eggs--the most highly processed form--were less expensive on a dozen equivalent basis than frozen and shell eggs.

Other data show that, overall, prices of the more highly processed foods have not increased any more rapidly over the years than those with a limited amount of processing. A recent publication states that, compared with 1947-49 levels, "prices of all relatively unprocessed and all processed foods went up about the same degree from 1939-1954" (2).

As might be expected, there were counterbalancing changes. Prices of some processed forms of individual foods increased more than those of the unprocessed forms; for others, the reverse was true. Hence, the effect of processing on prices must be appraised food by food. Generalizations can be erroneous.

OTHER MARKETING SERVICES USED BY INPLANT FACILITIES

This report deals primarily with food preparation services provided by marketing agencies. Among other kinds of marketing services used by these industrial facilities were grading, delivery service, credit arrangements, and packaging.

According to food service managers, grades and standards and inspection services were important in their selection of food, particularly of fresh meat, poultry, fluid milk and cream, and butter.

Prompt, dependable, and frequent delivery service was given particular emphasis. This may stem from a recent change in the purchasing practices of institutional food services. Not too long ago, it was rather standard practice to carry fair-sized inventories of canned foods and some staples. However, this survey showed that such products were being purchased at least once or twice a month, and some were bought weekly. One reason given for this change was that food service operators have become aware of the cost and speculative nature of carrying large inventories (3). As a result, they now are depending more and more on wholesale suppliers to maintain sufficient stocks to deliver items as needed.

Some of the dissatisfaction exhibited by inplant managers toward delivery services may result from this "deliver as needed" requirement. For, as a recent study found, half of the institutional orders were for 7 pieces or less, compared with 80 pieces or less ordered by half the food stores (3). One wholesaler found that an order of at least $40 was needed to cover his costs. With plants likely to be located away from the city center, there could be resistance by some wholesalers to frequent and relatively long-distance trips to deliver small orders unless the factory is on or near a regular route.

Most of these facilities purchased food on credit, either weekly or monthly. Less than a fifth paid cash on delivery. When they did, it was most likely to be for fresh fruits and vegetables, bakery products, and fluid milk.

Data were collected on container and package sizes for purchases of canned vegetables and fruits, fluid whole milk, ice cream, sugar, and jellies and jams. Analyses of these data show that more than 90 percent of the quantity of canned vegetables used was purchased in institutional-size containers (can size No. 10). As might be expected small plants bought a larger share of their vegetables in consumer units than did big plants.

Table 17.--Canned vegetables (excluding juices): Share of total quantity of canned vegetables used during a 4-week period, purchased in cans of specified sizes for food services in manufacturing plants with 250 or more employees, by employee size group, January-February 1956

Can sizes	All plants	Employee size group		
		250-499	500-999	1,000 or more
	Percent	Percent	Percent	Percent
#10	93	77	91	96
#2, #300, #303	3	10	4	2
#2 1/2	2	10	2	1
All other	2	3	3	1
Total pounds (millions)	46.2	4.4	11.3	30.5

Canned fruit purchases differed from this somewhat, for even the medium-sized and large plants bought proportionately more fruits than vegetables in consumer units. Among these, No. 2 1/2 cans were the most popular.

Table 18.--Canned fruits (excluding juices): Share of total quantity of canned fruits used during a 4-week period, purchased in cans of specified sizes for food services in manufacturing plants with 250 or more employees, by employee size group, January-February 1956

Can sizes	All plants	Employee size group		
		250-499	500-999	1,000 or more
	Percent	Percent	Percent	Percent
#10	81	64	82	83
#2, #300, #303	3	10	2	2
#2 1/2	11	21	13	9
All other	5	5	3	6
Total pounds (millions)	18.0	1.6	4.7	11.7

Consumer units were important in purchases of fluid whole milk. As tabulated here, expenditures for fresh milk in pint and half-pint containers were nearly five times those for bulk purchases of a gallon or more:

Container sizes	Expenditures
	Percent
Half pints	20
Pints	39
Quarts	13
Half gallons	5
Gallons (including 5-gallon containers)	12
All other	11
	100

By contrast, as shown here, cream was more likely to be purchased in larger containers, particularly in quarts and gallons:

Container sizes	Expenditures
	Percent
Pints	1
Quarts	42
Half gallons	2
Gallons	37
Five gallons	11
All other	7
	100

Expenditures for ice cream were divided about equally between "individual" and "bulk" (gallon or more) containers as the following indicates:

Container sizes	Expenditures
	Percent
3-6 ounces	38
Pints	1
Quarts	4
Gallons	33
More than 1 gallon	14
Sandwiches	2
All other	8
	100

Information on the use of individual servings of sugar showed that about 1/2 of 1 percent of the plants (chiefly large plants) purchased serving-size packs of sugar. These accounted for about 5 percent of the amount spent for all white sugar. Cubed sugar accounted for around 7 percent.

About the same situation prevailed for packs of marmalades and jellies. Less than 1/2 of 1 percent of the plants used portion sizes, with the large plants most likely to do so. Such packs accounted for around 7 percent of total expenditures for jellies and jams.

EXTENT OF FOOD PREPARATION LEFT FOR INPLANT KITCHENS

Another way to assess the importance of purchased marketing services is to estimate the amount of preparation remaining to be done in institutional kitchens. To develop an estimate, expenditures were classified according to whether an individual food (1) needed no further cooking, or only a limited amount of preparation such as washing, peeling, or adding milk or water before serving, (2) needed only to be heated, (3) or required cooking that called for close attention or the use of special techniques (app. table 30, p. 51). These analyses indicated that, of the total amount spent--

51 percent went for food requiring no further cooking, or only a minimum amount of additional preparation;

8 percent went for foods that needed only to be heated;

41 percent went for foods calling for more extensive preparation before serving.

Further analysis showed that, within each of the three classes listed, the major share of expenditures went for the following commodities (app. table 31, p. 52):

No further cooking or only a minimum amount of additional preparation:
- Dairy products
- Bakery products

Heated and served:
- Vegetables
- Meat

More extensive preparation, watching, or timing:
- Meat
- Beverages

COMPARISON OF HOUSEHOLD AND INPLANT EXPENDITURES FOR PROCESSED FOODS

Total expenditures by inplant facilities (winter 1956) and by urban households (spring 1955) show some differences in the percentages going for food processed to various levels. As shown by figure 2, inplant facilities spent a slightly larger share than city households for the more highly processed foods. 3/ Though these differences appear small, further analyses of expenditures for major commodities show important variations in practices. As presented in figure 3, inplant facilities spent proportionately more than city families for dairy products (excluding butter), bakery products, and beverages (excluding milk). (App. table 32, p. 52).

3/ Because of the special situation involving the use of mobile canteens by some factories, expenditures for products included in stages 3 and 4 were combined for this comparison. Expenditures for urban households (6) were classified according to levels of processing as given on pages 4 and 5 .

Differences due to season should not be too important as household purchases during spring months have been found to be fairly representative of those for the year as a whole. Purchases by institutional food services usually are not considered subject to wide seasonal fluctuations.

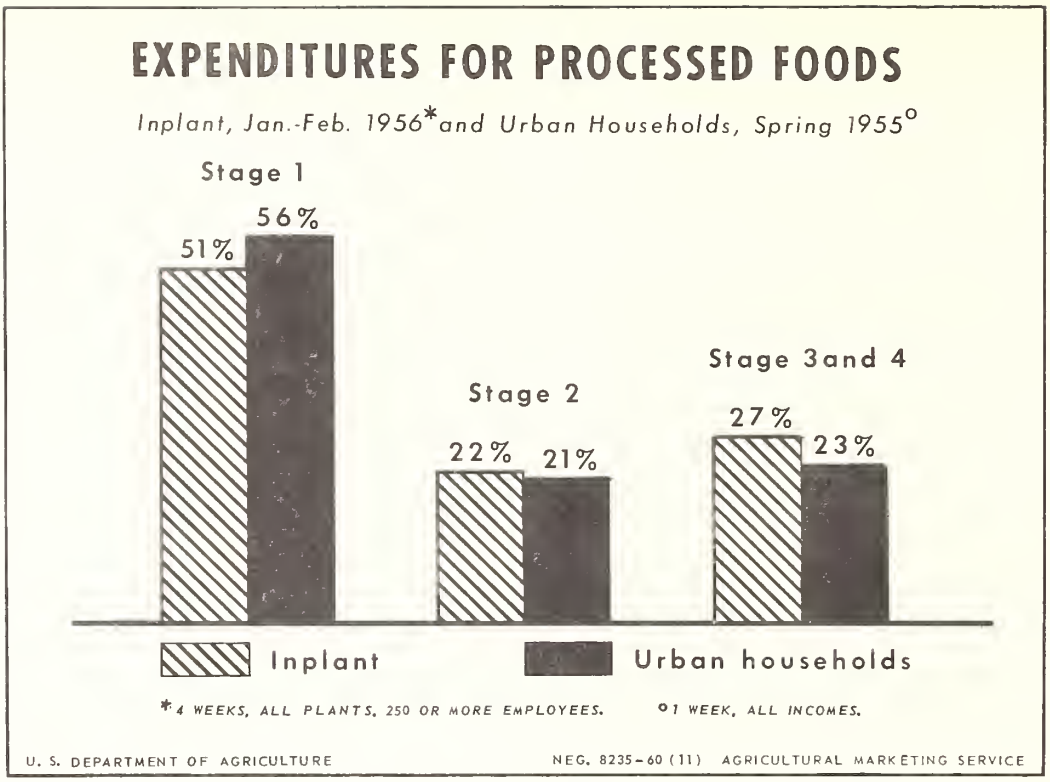

Figure 2

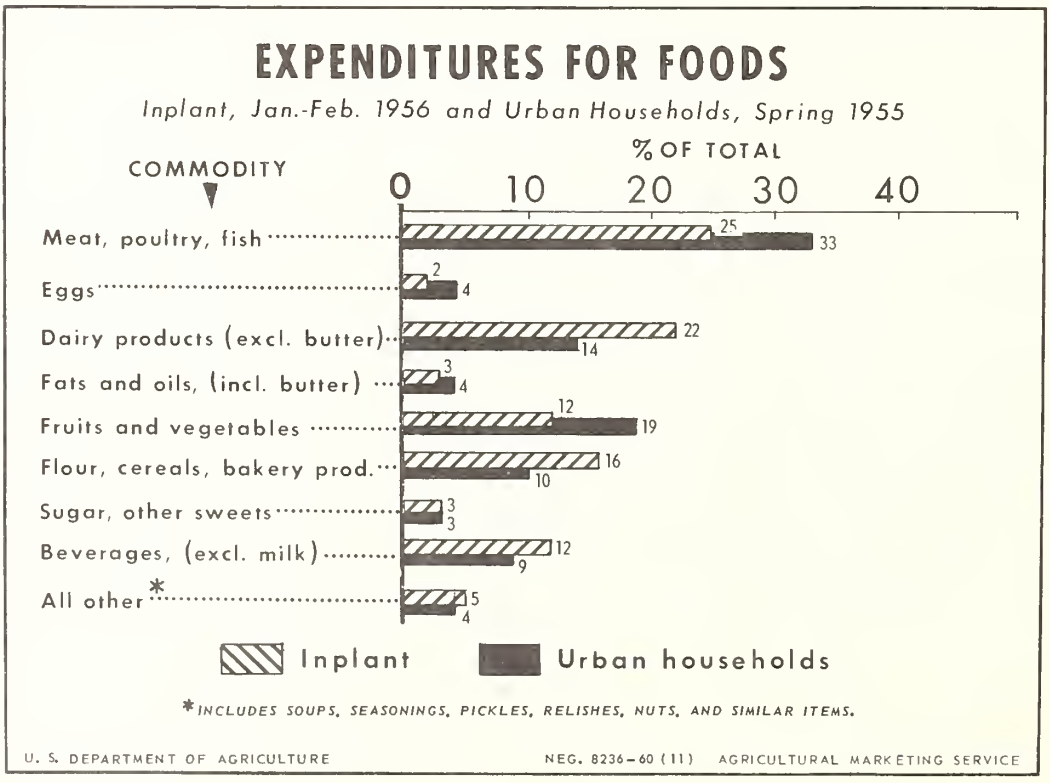

Figure 3

When expenditures for individual commodities were examined, compared with inplant facilities, urban households spent (app. table 33, p. 53):

Proportionately more for--	Proportionately less for--
Fresh meats	Cured meats
Fresh poultry	Canned and frozen poultry
Fresh eggs	Frozen and dried eggs
Fresh fruits and vegetables	Canned and frozen fruits and vegetables
Evaporated and condensed milk and cheese	Fluid whole milk
Flour and uncooked cereals	Bakery products
Jellies and jams	Sugar
Alcoholic beverages	Coffee and soft drinks

These differences appear to reflect the influence of the specific meals served and, to some extent, the importance attached to the "cost" of labor.

Most inplant food services were open at noontime and for coffee breaks. Less than half operated during other meal periods--morning (46 percent) and evening (40 percent). Though menus from most cafeterias offered dinner-type foods at noontime, other data indicate that employee choices were more likely to represent lunch-type meals.

As listed here, urban household data (7) also show that more meals, per family, were eaten away from home at noon than in the morning or evening:

Meal of day	Meals away from home, per family
	Number per week
Morning	0.6
Noon	3.3
Evening	.9
Total	4.8

In addition, two-thirds of these urban families purchased and ate snacks away from home (6).

Differences which can be due to the meals served are shown, too, by higher household expenditures for vegetables (dinner foods) and fruits, jellies, jams, and eggs (breakfast items). The lesser importance attached to the "cost" of labor is indicated by proportionately higher expenditures for certain fresh products.

FUTURE TRENDS IN THE USE OF MARKETING SERVICES BY INPLANT FOOD FACILITIES

If future practices of employee food services are an extension of those in recent years, the cost of labor is likely to be an important factor in the size and rate of increase in the use of marketing services that reduce food preparation. As in the past, however, attempts to offset rising costs probably will result in a combination of changes rather than a direct shift of preparation tasks to the marketing system. At least two types of changes are usually considered: Those that cut food costs, and those that reduce labor costs.

Changes often considered to lower food costs include limiting the variety of foods offered, changing the kind of dishes served, and using more of the less expensive forms of foods. Some of the more usual ways to try to reduce labor costs include the use of labor-saving equipment, purchasing more partially or wholly prepared foods, and centralizing food preparation activities.

Reducing Food Costs

Menus from these inplant operations indicate that managers have gone far in controlling the variety of food offered. Street restaurants can have fairly set menus, particularly if they depend for business more on changing clientele than on repeat customers. It is more difficult for inplant cafeterias with their "captive clientele" to restrict menus to this extent if employees are to be kept satisfied. Nevertheless, such changes as can be effected may help to streamline purchasing practices. This, in turn, could be reflected to some extent in wholesale food prices.

Changes in dishes served can cut costs if more of the less expensive foods are used, or if the more expensive ones are "stretched," for example, by mixing meat with cereal products such as spaghetti. Some plants may be able to do this, but, overall, costs probably would not be lowered significantly, as most of these facilities serve moderate cost meals. For example, dishes like chili con carne, beef stew, and spaghetti and meat sauce were among the more popular items found on the inplant menus.

The cost of food could be lowered somewhat by using less expensive forms of foods, such as dried milk, dried eggs, and margarine. But it appears that factors other than cost may operate to limit the possibilities of this; for example, customer preference, limitations on use in large quantity food preparation, and legal restrictions.

Nonfat dry milk was considerably less expensive than fluid whole milk, yet only 17 percent of the plants purchased this product, compared with 97 percent buying fluid whole milk. Undoubtedly, the use of milk as a beverage influenced purchases to a considerable extent. Even so, it is possible that other forms could have been more widely used if plants had elected to do so. On the average, only about 14 pounds of nonfat dry milk was used per plant, but quantities used by plants using it ranged from 40 pounds per plant in the Northeast to 126 pounds in the West.

About the same situation was found in relation to evaporated milk; users in the West consumed more than 4 1/2 times as much, per plant, as those in the Northeast.

Dried eggs, the most highly processed form, were the least expensive, yet only a few plants (4 percent) used this product as compared with fresh eggs (89 percent), the form that is highest in cost and requires considerably greater care in handling and storing. Limitations in their use for frying or slicing, and the widespread use of commercial bakery products, could be important factors.

A third example illustrating that factors other than price may enter into purchase decisions is shown in the use of butter and margarine. There was some variation by region, but more plants still used butter only than used margarine only, even though the average price per pound for butter was around three times that for margarine.

In this instance, legal restrictions may be important. Federal laws require public eating places in all States to inform customers when yellow margarine is being served. In addition, Minnesota, Wisconsin, California, and Pennsylvania prohibit the serving of yellow margarine in public eating places.

Commodity	Plants using 1/
	Percent
Butter only	27
Margarine only	18
Both butter and margarine	39
Did not use either commodity 2/	16
	100

1/ Based on data in "Buying Practices and Food Use of Employee Food Services in Manufacturing Plants," U. S. Dept. Agr., Mktg. Res. Rpt. 326, June 1959, p. 14.

2/ Includes plants purchasing food prepared off-premise, brought in and sold. Butter and margarine may have been used in the preparation of some of these latter foods.

Reducing Labor Costs

Except for cafeterias in need of modernization, inplant kitchens currently are using many of the major kinds of labor-saving equipment. These include potato peelers, large mixers, thermostatically controlled fry kettles, griddles, ranges and ovens, dishwashing machines, heated and chilled cabinets and serving tables, and similar items. There are a few other types of equipment available, such as automatic food shapers for hamburgers, croquettes, and meat balls, and some food services already have these.

Suggestions have been made that more kinds of equipment should be developed that would have more than one use, automatically control the "doneness" of products even to removing them from the oven or cooking surface, and increase the speed of cooking so that more customers could be served within a given time. These would affect food costs by conserving space needed for food preparation, cutting down waste through overcooking, reducing the need for employees with special skills, and providing greater efficiency by serving more customers during limited meal periods. Some equipment of this type has been developed and other types are being considered, but until these are widely used, estimates of their effect on labor costs must be highly speculative.

If the pattern of food use in many of these facilities had been adopted by all, foods representing about 10 percent of the expenditures could have been purchased in more highly serviced or processed form. Most of this change, however, would have been in an increased use of boned roasts and portion-sized meat.

It is difficult, of course, to project one's imagination to foods that may appear on the market in the future. Those currently mentioned in institutional magazines include quick desserts, potato flakes, dehydrated onions, minute meals, new cake mixes and pie fillings, oven-roasted turkey, boneless hams, and gourmet foods packaged in plastic bags, one portion to each, that can be dropped into boiling water and cooked in a few minutes as needed. Some of these are being used; others appear to have a limited place in this inplant market.

Future products can be produced by evolving new uses for foods now on the market, or modifying them by adding another ingredient or taking out one already included, or combining two products to develop a third.

New items can stimulate interest if they are adaptable to institutional practices. But new foods are likely to result more in shifts among products rather than increased use of all foods. For example, the use of more flour mixes may be offset by smaller use of flour, on a per capita basis.

Another development that can affect expenditures for specific marketing services is the growing use of central kitchens or commissaries to serve multiunit feeding operations. These central kitchens can employ fewer and more experienced cooks to prepare a variety of dishes, from soups to desserts, that are sent daily to various serving units. If these operations increase substantially, they may take over some of the food preparation jobs now being done by other marketing agencies; for example, the cutting up of carcasses and the preparation of baked products. This would reduce, rather than increase, the share of expenditures going for such foods now being produced by marketing agencies.

Combining all the foregoing factors, it appears that any major increase in the near future in this spending for marketing services will result largely from more people eating in these away-from-home establishments. Total consumption resulting from an increase in meals being eaten away from home is likely to be more important than increases in the share spent for marketing services.

Increases in the number of employees eating in these inplant facilities will depend on at least two factors: Relative levels of family incomes, and the availability of food service facilities. If incomes remain high, employees are likely to continue to eat some meals away from home, as there appears to be a direct relationship between income and expenditures for food purchased and eaten away from home. Data from the 1955 survey of household food consumption show that urban families of two or more persons with incomes of $10,000 and over spent three times as much for food away from home as those earning from $4,000 to $4,999 (middle-income families). This ratio increased to 4 to 1 when expenditures by families with incomes between $3,000 and $3,999 were considered, and to 6 to 1 for those with incomes between $2,000 and $2,999. The following tabulation shows the percentages of these families purchasing and eating meals away from home and the average amounts spent per family (6):

Income	Urban families eating away from home	Expenditures for food away from home, 1 week
Dollars	Percent	Dollars
2,000 - 2,999 . .	75	2.96
3,000 - 3,999 . .	86	4.11
4,000 - 4,999 . .	87	5.46
10,000 and over	95	16.37

As to the second point, the newer the factory the more likely it is to have some kind of food-serving arrangements; and large plants are more likely than small ones to provide such facilities. Hence, expansion of food services will depend somewhat on the rate at which new plants are built and present ones are enlarged. And, at least to some extent, the type of facilities operated--cafeteria, lunchroom, or mobile canteen--will determine changes in the use of individual foods.

APPENDIX

Methodology 4/

This study was designed to provide data about manufacturing plants in the nation as a whole and in four Census-defined regions of the country: Northeast, North Central, South, and West (5).

Conduct of the Survey

Detailed records of food use included two sets of inventories, taken 4 weeks apart, of all food on hand and records of all food purchase orders and requisitions for this period. These provided a comprehensive picture of the quantities and kinds of foods used in the period, how and in what forms they were purchased, expenditure data, and other detailed information needed for analyses of the market. Inventory and purchase data were taken during January-February 1956. Although no one period can be representative of the entire year, this time appeared to be relatively uncomplicated by major holidays, widespread strikes, or other factors that might affect food practices.

Design of the Sample

At the time the study was conducted, the latest data on manufacturing plants were records of the Bureau of Old-Age and Survivors' Insurance (BOASI) for the first quarter of 1953. The sampling for the survey was drawn from 28,146 manufacturing plants with 100 or more employees, as shown by these records; those which had fewer than 100 employees at the start of 1953, or which were not in existence at that time, were not represented.

From these records were drawn two separate samples, one of plants with 250 or more employees, the "major" sample for the study, and a less extensive sample of plants with 100 to 249 employees, the "smaller plant" sample. Within the major sample, used as a basis for this report, 3 size-of-plant groups were drawn: 250 to 499 employees (the "small" plants), 500 to 999 employees (the "medium" plants), and 1,000 or more employees (the "large" plants). More large plants and fewer small plants were included in the sample than their relative numbers in the universe would yield.

The initial telephone interviewing showed that a number of changes in plant size had occurred between the time the BOASI records were made and the time of the survey. These changes were incorporated into the study. And, because the samples were selected on the basis of 1953 data, weights for the major sample had to be calculated and applied on that basis. Nevertheless, tabulations are presented in terms of 1956 size of plant as learned in the survey.

To have enough cases for regional analysis, the sample included twice as many plants in the West as a proportional selection would have yielded. Analysis for the West is based on all plants studied there; in analysis for the total major plant study, however, these plants receive only half this weight.

The number of manufacturing plants with food services, in total and by region, employee size group, and form of operation, January-February 1956, were as follows:

4/ For detailed discussion of sampling and survey methodology, see "Employee Food Services in Manufacturing Plants," U. S. Dept. Agr., Mktg. Res. Rpt. 325.

	Plants in universe 1/
All plants	5,866*
Region:	
Northeast	1,720*
250 - 499	526
500 - 999	697
1,000 or more	497
Company-operated	724
Contractor-operated	996
North Central	2,349*
250 - 499	726
500 - 999	598
1,000 or more	1,025
Company-operated	721
Contractor-operated	1,628
South	1,427*
250 - 499	460
500 - 999	591
1,000 or more	376
Company-operated	524
Contractor-operated	903
West	370*
250 - 499	152
500 - 999	86
1,000 or more	132
Company-operated	153
Contractor-operated	217
Employee size group:	
250 - 499	1,864*
Company-operated	706
Contractor-operated	1,158
500 - 999	1,972*
Company-operated	778
Contractor-operated	1,194
1,000 or more	2,030*
Company-operated	638
Contractor-operated	1,392
Form of operation:	
Company-operated	2,122*
Contractor-operated	3,744*

1/ National estimates derived from sample of plants studied in this survey. Use starred (*) figures for estimating total universe based on average expenditures per plant shown in tables 19-22, pp. 41-46.

Glossary

Average per plant: Aggregate dollars divided by total number of manufacturing plants included in survey whether or not they purchased the food.

Food expenditures: Money value of food derived by adding the cost of food used from supplies on hand at start of survey (estimated using last price paid) to expenditures for food purchased and used during the 4-week period.

Company-operated: Management of food facilities controlled by the firm with all food service personnel, including manager, considered regular employees of the plant. Payroll and other expenses handled the same as those of other departments of the company.

Contractor-operated: Management of food facilities delegated to concessionaires, industrial caterers, or other outside firms under various contractual arrangements or by direct lease of space. Also included in this classification are a few food services managed by unions or employee organizations.

Notes on Use of Tables

Data presented relate only to manufacturing plants (with 250 or more employees in January 1956) providing some type of regular food services for their employees. Most of the tables relate to expenditures (money value) for foods processed to four defined stages. Foods included in each of these stages are listed on page 5.

Employee size groups: The following tabulation shows the average and median number of employees in small, medium, and large plants, and in each of the four regions:

Characteristics of plants	Number of employees	
	Average	Median
Employee size group:		
250 - 499	353	364
500 - 999	699	647
1,000 or more	3,441	2,056
Region:		
Northeast	1,254	644
North Central	2,013	890
South	1,105	639
West	1,481	589

The average and median number of employees in small and medium-sized plants are not too different; hence, average expenditures represent the practices of these two plant sizes fairly well. On the other hand, there is considerable difference between the average and median number of employees in large plants. As a result, data for this group are influenced to an appreciable degree by a few very large plants. The effect of these large plants is apparent to some extent in regional data also. A fourth employee size class would have been desirable if there had been a larger number of these giant-size plants.

To aid in evaluating the effect of the very large plants, the distribution of those with 1,000 or more employees is given here:

Employees (Number)	Plants having (Percent)
1,000 - 1,249	15
1,250 - 1,499	18
1,500 - 1,999	15
2,000 - 2,499	12
2,500 - 2,999	8
3,000 - 3,999	12
4,000 - 9,999	13
10,000 - 19,999	5
20,000 or more	2

Regionally, these large plants (1,000 or more employees) were divided as follows:

Region	Percent
Northeast	25
North Central	51
South	18
West	6
	100

Table 19.--Average expenditures, per plant, for foods processed to stage 1, manufacturing plants with 250 or more employees, total, by region, employee size group, and form of operation of food facilities, 4 weeks, January-February 1956 1/

Commodity	All plants	Region				Employee size group			Form of operation	
		North-east	North Central	South	West	250-499	500-999	1,000 or more	Company-operated	Contractor-operated
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Meat, fresh	433.90	331.65	496.28	457.15	423.52	138.79	279.04	855.24	580.23	350.91
Poultry, fresh	53.64	55.56	45.65	70.13	31.83	15.80	33.32	108.11	63.13	48.26
Eggs, fresh	70.47	88.20	54.88	78.26	56.97	18.60	42.02	145.73	97.48	55.16
Fish and shellfish, fresh	25.16	36.99	22.48	17.39	17.16	6.20	13.34	54.05	32.77	20.84
Dairy products (excluding butter):										
Fluid milk	506.42	459.28	580.38	473.79	382.01	116.69	227.57	1,135.08	402.27	565.48
Cream	80.62	107.78	90.75	41.73	40.05	46.48	36.76	154.55	82.22	79.71
Fats and oils (including butter):										
Salad and cooking oils	6.35	4.30	3.50	12.66	9.63	1.48	4.27	12.85	7.81	5.53
Fruits and fruit juices:										
Fresh (including juice)	24.75	17.02	28.34	24.09	40.32	5.74	10.48	56.05	30.04	21.74
Dried	3.14	1.71	2.77	5.15	4.36	.50	1.88	6.78	4.42	2.41
Vegetables, fresh:										
Potatoes	36.02	21.96	46.45	37.75	29.27	8.68	25.32	71.51	44.56	31.18
Vegetables, all other, fresh	72.72	63.11	77.43	76.20	74.13	19.04	41.64	152.19	82.75	67.04
Beans, peas, lentils, dried	13.85	9.22	17.47	14.50	9.86	3.44	6.04	30.98	14.90	13.25
Flour, cereals, and bakery products:										
Flour	17.85	11.54	16.47	27.24	19.79	3.19	8.97	39.96	18.67	17.39
Rice	3.95	4.72	3.29	4.46	2.52	1.29	1.85	8.42	5.13	3.28
Cornmeal	1.66	.14	.39	5.91	.41	.31	1.15	3.40	2.08	1.42
Grits	.18	2/	.02	.71	2/	.02	.17	.34	.11	.22
Hominy	.57	2/	.43	1.42	.74	.11	.53	1.02	.73	.47
Barley	.35	.47	.40	.19	.12	.08	.14	.81	.31	.38
Cornstarch	1.70	1.16	2.09	1.75	1.58	.54	.94	3.51	1.87	1.61
Tapioca	1.56	.95	.69	1.63	9.70	.49	1.30	2.81	1.65	1.51
Sugar and other sweets:										
Sugar	46.69	42.11	50.90	46.40	42.33	13.33	22.94	100.38	42.33	49.16
Molasses	.31	.43	.28	.22	.27	.09	.22	.59	.41	.26
Honey, maple sirup	.32	.37	.04	.66	.57	.13	.02	.77	.23	.36
Beverages (excluding milk):										
Coffee	281.45	278.50	311.21	250.27	226.53	85.10	155.44	584.11	279.58	282.50
Tea	15.96	19.49	16.27	13.68	6.34	5.54	14.16	27.27	18.06	14.76
Cocoa and chocolate	2.06	2.00	1.30	3.40	2.01	.44	1.72	3.89	2.92	1.57
All other:										
Nuts	4.39	2.41	3.18	8.50	5.37	1.13	2.67	9.05	3.63	4.82
Seasonings	17.61	11.01	17.66	22.50	29.09	6.03	9.35	36.26	22.98	14.56
Total 3/	1,725.50	1,576.17	1,892.48	1,697.85	1,467.08	499.28	945.24	3,609.12	1,846.93	1,656.60

1/ See p. 4 for definitions of different stages of processing. 2/ Less than 0.005 dollar. 3/ To convert averages to aggregates for the universe, use starred (*) figures on p. 38 for the appropriate class.

Table 20.--Average expenditures, per plant, for foods processed to stage 2, manufacturing plants with 250 or more employees, total, by region, employee size group, and form of operation of food facilities, 4 weeks, January-February 1956 1/

Commodity	All plants	Region				Employee size group			Form of operation	
		Northeast	North Central	South	West	250-499	500-999	1,000 or more	Company-operated	Contractor-operated
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Meat:										
Frozen	52.85	32.71	68.56	46.39	71.89	14.83	24.48	115.38	48.61	55.27
Cured	76.37	66.13	77.38	91.96	57.46	25.51	52.66	146.10	96.05	65.22
Canned	57.32	59.17	75.38	28.80	44.04	23.15	29.35	115.84	61.16	55.14
Corned, dried	21.02	20.05	27.38	12.43	18.26	10.95	10.69	40.29	28.53	16.76
Poultry:										
Frozen	5.43	3.21	7.64	3.78	8.06	1.09	3.18	11.60	6.65	4.74
Canned	3.07	2.40	3.99	3.01	.60	3.24	1.25	4.69	4.14	2.47
Eggs:										
Frozen	7.44	1.97	5.93	15.29	12.20	.15	.23	21.15	9.34	6.36
Dried	.91	.10	.18	3.20	.45	2/	.53	2.11	.25	1.28
Fish and shellfish:										
Frozen	30.09	28.28	34.90	25.27	26.66	6.28	19.34	62.41	35.69	26.92
Canned	21.68	29.34	22.28	10.82	24.18	14.21	14.71	35.31	31.53	16.09
Smoked, dried, cured	.62	1.86	.08	.17	2/	.02	.15	1.62	1.37	.19
Dairy products (excluding butter):										
Evaporated milk	5.86	1.95	4.01	9.90	20.23	1.69	2.49	12.97	6.50	5.50
Condensed milk	.47	.25	.61	.64	2/	.29	.40	.72	.38	.53
Nonfat dry milk	11.91	6.86	13.39	17.12	5.86	2.07	6.24	26.45	11.08	12.38
Cheese (natural)	19.85	20.68	20.95	14.01	31.61	7.60	8.81	41.83	26.71	15.98
Fats and oils (including butter):										
Butter	38.27	58.98	40.41	9.93	37.75	14.29	21.32	76.75	55.98	28.23
Margarine	10.37	5.91	9.06	18.44	8.22	3.96	8.20	18.35	12.37	9.23
Shortening	17.15	12.56	15.14	26.40	15.63	4.28	9.88	36.03	18.03	16.66
Lard	6.26	2.88	6.72	9.70	5.77	1.21	3.20	13.87	8.58	4.94
Fruits and vegetables (including juices):										
Fruits (including juices):										
Frozen	16.21	10.92	21.91	13.09	16.61	1.00	7.90	38.25	23.25	12.21
Canned	73.57	76.58	78.40	64.19	65.13	23.69	54.75	137.66	104.80	55.87
Vegetables (including juices):										
Potatoes:										
Prepeeled	8.04	7.43	14.21	.15	2.10	1.93	1.34	20.14	7.53	8.32
Frozen	.67	1.02	.53	.36	1.14	.69	.11	1.19	.53	.75
Canned	6.18	2.38	6.05	11.73	3.22	1.50	5.20	11.43	11.86	2.95
Chips, sticks	12.17	7.07	13.66	15.36	14.04	7.08	5.39	23.42	10.34	13.20
Other vegetables:										
Frozen	13.32	13.63	12.70	13.99	13.30	5.64	4.95	28.51	17.18	11.14
Canned (excluding pork and beans)	112.29	98.05	124.24	115.12	91.82	34.56	83.14	211.96	161.51	84.38
Flour, cereals, and bakery products:										
Oatmeal	.66	1.18	.41	.45	.65	.05	.18	1.68	1.13	.39
Macaroni, spaghetti, noodles	9.82	8.83	12.05	7.59	8.78	3.83	6.44	18.59	11.34	8.95

(Continued)

Table 20.--Average expenditures, per plant, for foods processed to stage 2, manufacturing plants with 250 or more employees, total, by region, employee size group, and form of operation of food facilities, 4 weeks, January-February 1956 1/--Continued

Commodity	All plants	Region				Employee size group			Form of operation	
		North-east	North Central	South	West	250-499	500-999	1,000 or more	Company-operated	Contractor-operated
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Sugar and other sweets:										
Corn, cane, and other sirups	2.87	2.21	2.65	3.95	3.17	.35	.92	7.09	3.14	2.72
Beverages (excluding milk):										
Chocolate sirup	.62	.65	.76	.39	.51	.08	.19	1.54	.96	.43
Soft drinks	93.38	57.08	47.08	225.59	46.16	39.56	87.58	148.43	92.42	93.92
All other:										
Peanut butter	.51	.49	.82	.06	.33	.38	.26	.88	1.06	.20
Total 3/	737.25	642.81	769.46	819.28	655.83	255.16	475.46	1,434.24	910.00	639.32

1/ See p.4 for definitions of different stages of processing. 2/ Less than 0.005 dollar. 3/ To convert averages to aggregates for the universe, use starred (*) figures on p. 38 for the appropriate class.

Table 21.--Average expenditures, per plant, for foods processed to stage 3, manufacturing plants with 250 or more employees, total, by region, employee size group, and form of operation of food facilities, 4 weeks, January-February 1956 1/

Commodity	All plants	Region				Employee size group			Form of operation	
		North-east	North Central	South	West	250-499	500-999	1,000 or more	Company-operated	Contractor-operated
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Meat, mixtures:										
Canned	4.69	3.27	4.39	6.53	6.04	2.28	4.19	7.38	5.79	4.06
Frozen	2.49	.90	3.89	2.25	1.87	.24	1.25	5.75	2.57	2.44
Luncheon meats:										
Canned	3.69	6.11	1.95	4.12	1.83	1.55	2.35	6.96	3.57	3.76
Fresh	65.41	69.28	71.53	57.70	38.32	22.02	45.62	124.46	68.49	63.66
Poultry, mixtures:										
Canned	.37	.27	.33	.61	.22	.32	.25	.54	.30	.42
Eggs	0	0	0	0	0	0	0	0	0	0
Fish and shellfish, mixtures:										
Canned	.37	.27	.32	.60	.22	.32	.25	.53	.29	.41
Dairy products (excluding butter):										
Ice cream	108.80	119.29	111.16	80.29	154.93	40.27	68.81	210.54	135.91	93.43
Ice cream mix	.11	2/	.24	2/	.21	2/	.16	.16	.12	.11
Mellorine	.79	2/	1.14	1.20	.65	2/	.12	2.17	1.26	.52
Cheese, processed (including spreads)	15.89	17.95	16.22	12.42	17.67	6.63	8.91	31.18	16.47	15.56
Fats and oils (including butter):										
Salad dressings	13.46	13.60	12.65	13.80	16.63	4.83	9.68	25.06	16.94	11.49
Fruits and vegetables (including juices):										
Fruits	0	0	0	0	0	0	0	0	0	0
Vegetables:										
Catsup	10.22	8.28	12.12	10.46	6.18	3.53	7.45	19.05	12.37	9.00
Relishes	3.91	2.50	5.10	3.52	4.38	.80	2.58	8.04	5.41	3.06
Chili and other sauces	3.63	3.90	4.03	2.91	2.58	1.00	3.01	6.63	6.48	2.01
Pork and beans	4.26	4.91	4.23	3.84	3.00	1.52	4.25	6.78	6.53	2.97
Flour, cereals, and bakery products:										
Flour mixes	9.71	9.16	9.33	10.64	11.01	1.55	5.93	20.87	10.57	9.22
Ready-to-eat cereals	1.65	1.44	1.38	2.12	2.55	.45	.63	3.75	2.21	1.34
Macaroni & spaghetti products, canned	.12	.20	.05	.05	.42	.06	.12	.17	.14	.10
Bakery products	502.13	488.34	578.57	416.01	413.25	214.03	325.31	938.38	497.91	504.53
Sugar and other sweets:										
Jellies and jams	3.57	3.56	3.13	3.97	4.82	1.00	3.51	5.98	5.62	2.41
Toppings and beverage sirups	7.74	2.06	15.71	2.73	2.89	1.21	1.12	20.18	2.84	10.53
Candies	30.22	28.63	26.27	43.72	10.58	12.17	26.96	49.95	27.03	32.03
Beverages (excluding milk)	.82	1.81	.04	.28	3.30	2/	.05	2.32	1.93	.19

(Continued)

Table 21.--Average expenditures, per plant, for foods processed to stage 3, manufacturing plants with 250 or more employees, total, by region, employee size group, and form of operation of food facilities, 4 weeks, January-February 1956 1/--Continued

Commodity	All plants	Region				Employee size group			Form of operation	
		North-east	North Central	South	West	250-499	500-999	1,000 or more	Company-operated	Contractor-operated
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
All other:										
Soups and soup bases	42.09	45.51	54.19	20.00	34.56	22.78	27.16	74.31	57.72	33.22
Leavening agents	1.78	1.06	1.12	3.63	2.10	.34	.86	3.99	2.14	1.57
Chiffon bases	.19	.11	.16	.41	2/	.04	2/	.53	.03	.29
Stabilizers	.20	.12	.15	.36	.24	2/	.01	.57	.05	.28
Sherbets and ices	1.21	.50	.56	1.93	5.85	.45	.82	2.28	1.95	.79
Desserts (including puddings)	17.05	18.86	18.46	11.79	19.99	5.31	11.97	32.77	22.49	13.97
Total 3/	856.57	851.89	958.42	717.89	766.29	344.70	563.33	1,611.28	915.13	823.37

1/ See p.4 for definitions of different stages of processing. 2/ Less than 0.005 dollar. 3/ To convert averages to aggregates for the universe, use starred (*) figures on p. 38 for the appropriate class.

Table 22.--Average expenditures, per plant, for foods processed to stage 4, manufacturing plants with 250 or more employees, total, by region, employee size group, and form of operation of food facilities, 4 weeks, January-February 1956 1/

Commodity	All plants	Region				Employee size group			Form of operation	
		Northeast	North Central	South	West	250-499	500-999	1,000 or more	Company-operated	Contractor-operated
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Meat, ready-to-serve:										
Meat, sliced, hot	7.20	13.79	2.85	7.43	3.29	3.10	3.13	14.92	12.73	4.07
Mixtures with meat, hot	9.37	12.61	10.01	5.00	7.14	7.01	4.44	16.33	11.07	8.41
Sandwiches	24.10	13.42	19.65	49.11	5.58	18.24	21.59	31.91	19.68	26.60
Miscellaneous	2.14	1.73	1.22	2.25	9.44	.36	2.10	3.80	2.47	1.95
Poultry, ready-to-serve:										
Mixtures with poultry, hot	.59	.88	.46	.58	.03	.25	.31	1.16	1.07	.32
Eggs	0	0	0	0	0	0	0	0	0	0
Fish and shellfish, ready-to-serve:										
Mixtures with fish, hot	.58	.87	.46	.58	.02	.25	.30	1.16	1.06	.31
Dairy products (excluding butter):										
Sandwiches, cheese	1.69	2/	.25	6.55	2/	.87	1.00	3.13	2.36	1.32
Fats and oils (including butter)	0	0	0	0	0	0	0	0	0	0
Fruits and vegetables (including juices):										
Fruits	.29	1.01	2/	2/	2/	2/	2/	.85	.81	2/
Vegetables, ready-to-serve:										
Hot	1.69	3.89	.98	.38	1.01	.47	.09	4.36	2.81	1.05
Salads	.62	1.42	.33	.15	.51	.43	.51	.89	.45	.71
Flour, cereals, bakery products, ready-to-serve:										
Macaroni, spaghetti, noodles, rice dishes, hot	2.45	2.10	2.46	1.32	8.30	.86	1.12	5.19	3.02	2.12
Sugar and other sweets	0	0	0	0	0	0	0	0	0	0
Beverages (excluding milk):										
Cocoa, hot	.41	1.42	2/	2/	2/	2/	.49	.72	2/	.65
All other:										
Soups, hot	6.84	13.57	6.91	2/	1.57	4.31	2.22	13.65	7.71	6.35
Total 3/	57.97	66.71	45.58	73.35	36.89	36.15	37.30	98.07	65.24	53.86

1/ See p.4 for definitions of different stages of processing. 2/ Less than 0.005 dollar. 3/ To convert averages to aggregates for the universe, use starred (*) figures on p.38 for the appropriate class.

Table 23.--Distribution of expenditures among foods processed to specified stages, food services in manufacturing plants with 250 or more employees, by region, employee size group, and form of operation of food facilities, 4 weeks, January-February 1956

Characteristics of plants	Plants with food services	Average number of employees per plant	Total expenditures for food	Stage of processing of products bought 1/			
				First	Second	Third	Fourth
	Number	Number	Mil. dol.	Percent	Percent	Percent	Percent
All plants	5,866	1,537	19.8	51	22	25	2
Region:							
Northeast	1,720	1,254	5.4	50	21	27	2
North Central	2,349	2,013	8.6	52	21	26	1
South	1,427	1,105	4.7	51	25	22	2
West	370	1,481	1.1	50	23	26	1
Employee size group:							
250 - 499	1,864	353	2.1	44	23	30	3
500 - 999	1,972	699	4.0	47	23	28	2
1,000 or more	2,030	3,441	13.7	54	21	24	1
Form of operation:							
Company-operated	2,122	1,181	7.9	50	24	24	2
Contractor-operated	3,744	1,743	11.9	52	20	26	2

1/ See p. 5 for list of foods included in each stage of processing.

Table 24.--Relative expenditures for major commodities, by method of processing, food services in manufacturing plants with 250 or more employees, 4 weeks, January-February 1956

Commodity	Canned	Quick frozen	Cured	Baked	Dried	All other	
						Total	Off-premise 1/
	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Meat	18	43	99	0	24	20	73
Poultry	1	4	0	0	0	2/	1
Eggs	0	6	0	0	5	0	0
Fish and shellfish	6	23	1	0	0	2/	1
Dairy products (excluding butter)	2	0	0	0	71	27	3
Fats and oils (including butter)	0	0	0	0	0	15	0
Fruits and vegetables (including juices):							
Fruits	21	13	0	0	3/	2/	1
Vegetables	40	11	0	0	3/	4	4
Flour, cereals, and bakery products	0	0	0	100	0	4	4
Sugar and other sweets	0	0	0	0	0	8	0
Beverages (excluding milk)	0	0	0	0	0	17	1
All other 4/	12	0	0	0	0	5	12
Total	100	100	100	100	100	100	100

1/ Food prepared in off-premise kitchens and brought in to plant on mobile canteens. Includes only hot foods, salads, and sandwiches.

2/ Less than 0.05 percent.

3/ Dried fruits and vegetables are included in stage 1 (limited processing).

4/ Chiefly canned mixtures with or without meat or poultry.

Table 25.--Share of expenditures for foods processed to stage 2, by method of processing, employee food services in manufacturing plants with 250 or more employees, 4 weeks, January-February 1956 1/

Method of processing	All plants	Region				Employee size group			Form of operation	
		Northeast	North Central	South	West	250-499	500-999	1,000 or more	Company-operated	Contractor-operated
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Stage 2 products	100	100	100	100	100	100	100	100	100	100
Canning	38	42	41	30	38	40	40	37	42	35
Freezing	17	14	20	14	23	12	13	20	15	18
Curing	10	10	10	11	9	10	11	10	11	10
Drying	6	6	7	5	5	6	5	6	6	6
Other	29	28	22	40	25	32	31	27	26	31
Cheese (natural)	3	3	3	2	5	3	2	3	3	3
Fats	10	13	9	8	10	9	9	10	10	9
Soft drinks	13	9	6	28	7	16	18	10	10	15
Miscellaneous 2/	3	3	4	2	3	4	2	4	3	4
Total expenditure (million dollars)	4.4	1.1	1.8	1.2	.3	.5	1.0	2.9	2.0	2.4

1/ See p.4 for definitions of different stages of processing.
2/ Includes kippered fish; potatoes, prepeeled, chips, and sticks; chocolate sirup; and peanut butter.

Table 26.--Canned products, stage 2 of processing: Distribution of expenditures among major commodities, food services in manufacturing plants, 4 weeks, January-February 1956 1/

Commodity	All plants	Region				Employee size group			Form of operation	
		North-east	North Central	South	West	250-499	500-999	1,000 or more	Company-operated	Contractor-operated
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
All canned products	100	100	100	100	100	100	100	100	100	100
Meat	20	22	24	12	18	23	15	22	16	25
Poultry	1	1	1	1	2/	3	1	1	1	1
Fish and shellfish	8	11	7	4	10	14	8	7	8	7
Vegetables (including juices):										
Potatoes	2	1	2	5	1	1	3	2	3	1
Other vegetables	37	33	37	44	35	31	41	37	40	35
Juices	3	3	3	3	2	3	2	3	2	3
Fruits (including juices):										
Fruits	21	21	20	22	22	16	23	21	23	19
Juices	6	7	5	5	4	7	5	5	5	6
Milk:										
Evaporated and condensed	2	1	1	4	8	2	2	2	2	3
Total expenditure (million dollars)	1.6	.5	.7	.3	.1	.2	.4	1.0	.8	.8

1/ See p.4 for definitions of different stages of processing.
2/ Less than 0.05 percent.

Table 27.--Meat: Relative expenditures for different forms of meat processed to stages 1 and 2, food services in manufacturing plants with 250 or more employees, 4 weeks, January-February 1956

Method of processing	All plants	Region				Employee size group			Form of operation	
		Northeast	North Central	South	West	250-499	500-999	1,000 or more	Company-operated	Contractor-operated
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Stage 1:										
Retail cuts	84	78	91	75	93	85	84	84	78	89
Wholesale and primal	16	22	9	25	7	15	16	16	22	11
Total	100	100	100	100	100	100	100	100	100	100
Stage 2:										
Canned	28	33	30	16	23	31	25	28	26	28
Cured	37	37	31	51	30	34	45	34	41	34
Dried	10	11	11	7	10	15	9	10	12	9
Frozen	25	19	28	26	37	20	21	28	21	29
Total	100	100	100	100	100	100	100	100	100	100

Table 28.--Proportion of expenditures for fruits (including juices) processed to stage 2, purchased in different forms, manufacturing plants with 250 or more employees, by employee size group, 4 weeks, January-February 1956

Employee size group	Expenditure for				Total
	Canned		Frozen		
	Fruits	Juices	Fruits	Juices	
	Percent	Percent	Percent	Percent	Percent
250 - 499 employees	66	30	1	3	100
500 - 999 employees	72	16	10	2	100
1,000 or more employees	62	16	17	5	100

Table 29.--Relative expenditures for different forms of soup, by employee size group, 4 weeks, January-February 1956

Method of processing	Employee size group		
	250 - 499	500 - 999	1,000 or more
	Percent	Percent	Percent
Canned:			
Vegetables:			
Ready-to-serve	2	14	14
Condensed	36	29	20
Meat, poultry, fish:			
Ready-to-serve	10	6	8
Condensed	28	30	12
Frozen	0	1	0
Dry mixes	2	2	4
Bases	6	10	26
Prepared off-premise	16	8	16
Total	100	100	100

Table 30.--Expenditures for food classified according to extent of preparation remaining to be done in the inplant kitchen prior to serving, employee food services in manufacturing plants with 250 or more employees, 4 weeks, January-February 1956

Commodity	No further preparation	Heat-and-serve	More extensive preparation
	Percent	Percent	Percent
All commodities	51	8	41
Meat	9	9	82
Poultry	0	5	95
Eggs	0	0	100
Fish and shellfish	12	17	71
Dairy products (excluding butter)	89	0	11
Fats and oils (including butter)	71	0	29
Vegetables (including juices)	24	37	39
Fruits (including juices)	82	18	0
Flour, cereals, and bakery products	91	0	9
Sugar and other sweets	84	0	16
Beverages (excluding milk)	24	4	72
Soups	0	78	22
All other 1/	74	9	17

1/ Includes canned and frozen mixtures, food prepared off-premise, catsup and chili, desserts, and nuts.

Table 31.--Relative expenditures for major groups of commodities which are purchased ready to serve or usually call for varying amounts of additional preparation in inplant kitchens, employee food services in manufacturing plants with 250 or more employees, 4 weeks, January-February 1956

Commodity	No further preparation	Heat-and-serve	More extensive preparation
	Percent	Percent	Percent
Meat	4	24	42
Poultry	0	1	4
Eggs	0	0	6
Fish and shellfish	1	5	4
Dairy products (excluding butter)	39	0	6
Fats and oils (including butter)	4	0	2
Vegetables (including juices)	4	39	8
Fruits (including juices)	5	8	0
Flour, cereals, and bakery products	29	0	4
Sugar and other sweets	4	0	1
Beverages (excluding milk)	5	6	21
All other 1/	5	17	2
Total	100	100	100

1/ Includes canned and frozen mixtures, food prepared off-premise, catsup, and chili; desserts; and nuts.

Table 32.--Relative expenditures for major commodities within each of 3 levels of processing, urban households, 1 week, spring 1955, and food services in manufacturing plants with 250 or more employees, 4 weeks, January-February 1956 1/

Commodity 1/	Stage of processing of products bought 2/					
	First		Second		Third	
	Urban 3/	Inplant	Urban 3/	Inplant	Urban 3/	Inplant
	Percent	Percent	Percent	Percent	Percent	Percent
Meat	30	25	25	28	15	13
Poultry	9	3	0	1	0	4/
Eggs	7	4	0	1	0	0
Fish and shellfish	2	2	10	7	0	4/
Dairy products (excluding butter)	17	34	9	5	13	14
Fats and oils (including butter)	1	4/	14	10	3	1
Fruits and vegetables (including juices)	22	9	31	33	2	3
Flour, cereals, and bakery products	2	2	2	2	37	57
Sugar and other sweets	2	3	4/	4/	7	4
Beverages (excluding milk)	7	17	7	13	17	4/
All other	1	1	2	4/	6	8
Total	100	100	100	100	100	100

1/ See p. 5 for foods included in each commodity group.

2/ See p. 4 for definitions of different stages of processing. For this survey, foods in stages 3 and 4 were combined as shown on p. 10.

3/ Based on data for urban households, all incomes, "Food Consumption of Households in the United States," U. S. Dept. Agr. Household Food Consumption Survey, 1955, Rpt. No. 1, December 1956.

4/ Less than 0.05 percent.

Table 33.--Relative expenditures for major commodities with specified levels of processing, urban households, 1 week, spring 1955, and food services in manufacturing plants with 250 or more employees, 4 weeks, January-February 1956 1/

Commodity and universe 2/	Stage of processing 3/			Total
	First	Second	Third	
	Percent	Percent	Percent	Percent
All foods:				
Urban	56	21	23	100
Inplant	51	22	27	100
Meat:				
Urban	66	20	14	100
Inplant	57	27	16	100
Poultry:				
Urban	100	0	0	100
Inplant	85	13	2	100
Eggs:				
Urban	100	0	0	100
Inplant	89	11	0	100
Fish and shellfish:				
Urban	33	67	0	100
Inplant	32	67	1	100
Dairy products (excluding butter):				
Urban	66	13	21	100
Inplant	78	5	17	100
Fats and oils (including butter):				
Urban	8	76	16	100
Inplant	7	78	15	100
Fruits and vegetables (including juices):				
Urban	64	34	2	100
Inplant	36	58	6	100
Flour, cereals, and bakery products:				
Urban	11	4	85	100
Inplant	5	2	93	100
Sugar and other sweets:				
Urban	39	3	58	100
Inplant	52	3	45	100
Beverages (excluding milk):				
Urban	42	17	41	100
Inplant	76	24	4/	100
All other:				
Urban	29	15	56	100
Inplant	24	1	75	100

1/ Data for urban households based on information presented in "Food Consumption of Households in the United States," U. S. Dept. Agr. Household Food Consumption Survey, 1955, Rpt. No. 1, December 1956.

2/ See p. 5 for foods included in each commodity group.

3/ See p. 4 for definitions of different stages of processing. For this survey, foods in stages 3 and 4 were combined as shown on p. 10.

4/ Less than 0.05 percent.

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