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Consumers' Knowledge and Use of Government Grades for Selected Food Items

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ABSTRACT

In a national sample of households, interviews showed that consumers were unfamiliar with USDA grades for food.

For the most part consumers evidenced little knowledge of Federal grades and significant confusion between the grades and inspection marks. The most frequent awareness score was zero.

The study also indicates that many consumers believe all food items to be graded and frequently report buying Grade A when no such grade designation exists.

Key Words: Competition, Pricing, Consumer-Grades, Grading Agricultural Products, Marketing, Survey, Inspections, Food Products.

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402

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Washington, D. C. 20250 APRIL 1970

SUMMARY

Most U.S. consumers know little about Federal grades for the foods they buy, but those who are aware of grades say they find them helpful in their buying decisions.

Telephone interviews of 3,000 sample households showed that many consumers believed that all foods had USDA grades and they bought graded foods. The survey, made to determine consumers' knowledge of and attitude toward USDA grades and standards, showed that many consumers confuse grade and inspection marks.

Only 22 percent of the respondents correctly identified the shield-shaped grademark, and 30 percent, the circular inspection mark. However, the use of both adjective and letter grades for different food items apparently was not confusing. And, despite few correct identifications of the inspection mark for meat and poultry, nearly 80 percent of the respondents could explain the purpose of USDA inspection.

CONSUMERS' KNOWLEDGE AND USE OF GOVERNMENT GRADES FOR SELECTED FOOD ITEMS

By T. Q. Hutchinson, Industry Economist
Marketing Economics Division

INTRODUCTION

The U.S. Department of Agriculture has established official U.S. grade standards--measures of quality--for a wide variety of foods. USDA grades were designed to meet the need of producers, dealers, and consumers for a uniform yardstick to measure important variations in quality. The producer wants to obtain a fair price for the quality of his product. The processor and distributor need a quality gage to facilitate buying and selling, particularly at long distances. The consumer wants assurance that he is obtaining product quality in line with the price paid. U.S. standards provide a means of describing product quality in uniform language--grades--and of pricing foods according to their quality. The standards are used by USDA in grading services under which the quality (grade) of the product is officially certified.

These food grading services--often operated cooperatively with State departments of agriculture--are voluntary and users pay a fee to cover the cost. The percentage of the total supply officially graded varies from one product to another, and ranges from none for some products to 85 percent for fed beef.

Foods officially graded under the USDA grading services may carry the U.S. grade shield at the option of the packer or distributor. Therefore, these grade shields may or may not appear on foods offered to consumers. The availability of foods carrying the U.S. grade shield varies widely among different parts of the country.

Because the grade standards for each food cover the entire range of quality, the number of grades for a product is based on the variability of the product. For example, while eight grades are used to span the range of beef quality, only three are used for frying chicken.

Even though there are two or more grades for a product, most retail stores offer their customers only one grade--the one they have found satisfies most shoppers. USDA Choice, for example, is the only grade of beef available to shoppers in many stores--though some stores offer two grades, such as Prime and Choice. The most notable exception to the single-grade availability is eggs. Many stores offer not only U.S. Grade A eggs, but also the premium quality U.S. Grade AA and sometimes the lower quality U.S. Grade B, as well. In addition to beef and eggs, the foods that shoppers most likely find carrying the USDA grade shield include chicken, turkey, lamb, and butter.

Grade terminology differs from product to product, largely because the grades, in most cases, are based on long-standing industry practices and trade terminology. U.S. grades for food are the only such Government quality guide available for any consumer product.

USDA's Consumer and Marketing Service which is responsible for the grade standards and for the Federal-State grading services, conducts a public information program to inform consumers and others about the USDA grades. C&MS nevertheless is aware that many consumers do not know about food grades and is concerned that many may find grade terminology confusing. The Economic Research Service made this survey at C&MS' request.

PURPOSE OF STUDY

While USDA grades and standards themselves are widely used at the wholesale level, little information is available about the program's effectiveness and usefulness to consumers. To assist in evaluating the usefulness of the grades and standards program, the survey was designed to obtain information on (1) the extent consumers know and use Government grades in buying food products, (2) the extent of confusion about grade terminology, and (3) consumers' preference for an alternative system of grade terminology.[1] The questionnaire and instructions to the interviewer are reproduced in appendix I.

METHODOLOGY

A national probability sample of 4,000 telephone households was drawn. The sample was designed to permit cross-breaks by region and community size groups, but such a breakdown is not included. Researchers who wish copies of the raw data may write the author. The regions considered are essentially census regions (table 1). The three community-size strata are:

(1) Standard Metropolitan Statistical Areas of more than 1 million population, (2) Standard Metropolitan Statistical Areas of less than 1 million population, plus all other urban areas as defined for census purpose, and (3) rural areas outside of Standard Metropolitan Statistical Areas. Demographic information--education, income, age, and size of household--were obtained from respondents.

Telephone interviews were conducted between December 8, 1967, and February 6, 1968. A total of 3,014 interviews were completed.

Table 1.--Total U.S. universe and completed interviews by regions

Region	1965 households[1]		1965 telephone households[2]		Interviews	
	Number	Percentage	Number	Percentage	Number	Percentage
	1,000 units	Percent	1,000 units	Percent	1,000 units	Percent
Northeast	14,311	25.0	12,322	26.8	795	26.4
North Central	16,069	28.0	13,677	29.7	895	29.6
Southeast	8,117	14.2	5,777	12.6	400	13.3
South Central	8,975	15.6	6,309	13.7	402	13.3
West	9,827	17.2	7,900	17.2	522	17.3
Total	57,300	100.0	45,985	100.0	3,014	100.0

1/Census Publication Series P-25, #356, Estimates of Number of Households, by State, July 1, 1965, January 9, 1967.

2/Source: Census Publication Series P-20, #146, Characteristics of Household With Telephones, March 1965, December 27, 1965.

3/Totals do not add due to rounding.

1/Data used in the study were obtained by Chilton Research Service, Inc., Philadelphia, Pa., under contract.

The disposition of the sample is shown in the following tabulation:

	Number	Percent
Total sample	4,000	100.0
No response due to:		
Language barrier, illness, eligible respondent away for duration of the study	317	7.9
Four calls placed without contact	94	2.4
Refusals	575	14.3
Completed interviews	3,014	75.4

Interviewers asked to speak with the person in the household responsible for making decisions in purchasing food. The small number of male respondents precluded attributing any statistical validity to differentiating male from female responses. Data in this report, therefore, essentially reflect the knowledge and attributes of U.S. female homemakers.

To avoid serial bias (order in which questions are asked affecting the answers), the subsections of each question in which serial bias could affect the response were asked in rotating sequences.

CONSUMER SHOPPING HABITS

Purpose of Questions

Several screening questions were asked with a twofold purpose (1) to restrict questioning to food items usually purchased--consumers could not be expected to know about commodities which they did not purchase or purchased very infrequently, and (2) to restrict questioning to food items for which the respondent demonstrated some knowledge.

Incidence of Purchase

Everyone in the sample had purchased one or more of the food items within the previous 12 months (table 2). Only butter and whole turkey were purchased by fewer than 80 percent of the respondents. The widespread substitution of margarine for butter probably caused the relatively low incidence of butter purchases observed.

Table 2.--3,014 respondents reporting purchasing selected food items during 1967

Food	Respondents who purchased		Respondents who did not purchase	
	Number	Percent	Number	Percent
Beefsteak	2,614	86.7	400	13.3
Bacon	2,775	92.1	239	7.9
Eggs	2,908	96.5	106	3.5
Butter	2,301	76.4	713	23.6
White bread	2,844	94.4	170	5.6
Margarine	2,628	87.2	386	12.8
Fresh milk	2,888	95.8	126	4.2
Fresh potatoes	2,775	92.1	239	7.9
Fresh apples	2,764	91.7	250	8.3
Whole turkey	1,892	62.8	1,122	37.2

Frequency of Purchase

Frequency of purchase statistics showed that most of the food items were purchased two or four times per month (table 3), indicating weekly or semimonthly shopping patterns for most commodities. White bread and fresh milk were most frequently bought more than four times per month.

As expected, whole turkey was most often purchased twice a year. Presumably, these two purchases occur at Thanksgiving and Christmas when turkey is traditionally served.

Place of Purchase

Reflecting their large sales volume, supermarkets were reported as the place of purchase for all selected food items by more than 50 percent of the respondents (table 4).[2] For 9 of the 10 food items studied, 66 to 81 percent of the purchases were from supermarkets. Neighborhood stores accounted for 16 to 27 percent of all purchases. Home delivery was significant only for eggs (7.9 percent) and fresh milk (24.7 percent). Fresh milk purchases were about evenly divided between supermarkets and other sources.

INFORMATION USED IN BUYING DECISIONS

More respondents reported looking at the label on the food items they purchased than not (table 5). However, for most products (except fresh potatoes and fresh apples, which are often retailed without a package or label), 20 to 36 percent of the respondents did not look at the label. The implications are that they are indifferent among similar products or that they judged a product's qualities without reference to printed information. In the latter case, a consumer having previously chosen among products might view the label only as a means of identification.

It might be expected that freshness or age of eggs, butter, white bread, and milk would be important to consumers. Less than 10 percent of those reporting buying these commodities, however, mentioned looking for a date of manufacture or packing. The most probable cause is that a date does not appear on most foods and, when it does, it is relatively difficult for consumers to interpret. It is also possible that the freshness of retail offerings of these commodities may not vary significantly among offerings and usually fulfills consumers' preferences for this quality.

All graded offerings of shell eggs are dated, but three somewhat different systems are used. Most packaged white bread and fresh milk bear a coded date which may not be readily understood by consumers. Butter is often coded as to plant and lot number, but only the most informed consumers would have this information.

Butter, white bread, and margarine were the only food items that 50 percent or more of the buyers reported looking for, and presumably purchasing, by brand.

Less than 10 percent of the buyers reported looking for the color of any food item. However, the questionnaire did not ask buyers if they looked for color.

No one reported looking for color for beefsteak or whole turkey, whereas almost 10 percent reported looking for color on potatoes and apples (table 5). It is possible

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2/ In 1967, supermarkets and superettes accounted for 89.9 percent of $74.195 billion in grocery store sales; see Progressive Grocer, Vol. 47, No. 4, New York, April 1968, p. 84.

Table 3.--Usual frequency of purchase of selected food items[1]

Frequency of purchase	Beef-steak	Bacon	Eggs	Butter	White bread	Marga-rine	Fresh milk	Fresh pota-toes	Fresh apples	Whole turkey[2]
Once per month										
Number	461	588	182	522	131	532	60	954	972	581
Percent	18.0	21.3	6.3	22.9	4.6	20.4	2.1	34.8	35.9	30.9
Twice per month										
Number	525	702	524	523	200	700	90	848	662	683
Percent	20.5	25.5	18.1	23.0	7.1	26.9	3.1	31.0	24.4	36.3
Three times per month										
Number	207	165	120	73	54	120	32	120	154	302
Percent	8.1	6.0	4.2	3.2	1.9	4.6	1.1	4.4	5.7	16.0
Four times per month										
Number	944	1,080	1,679	989	1,146	1,051	823	683	758	182
Percent	36.8	39.2	58.0	43.5	40.5	40.4	28.6	24.9	28.0	9.7
Five times per month										
Number	425	219	389	169	1,299	201	1,872	133	164	134
Percent	16.6	8.0	13.4	7.4	45.9	7.7	65.1	4.9	6.0	7.1
Total responding										
Number	2,562	2,754	2,894	2,276	2,830	2,604	2,877	2,738	2,710	1,882
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No response										
Number	52	21	14	25	14	24	11	37	54	10
Total buying										
Number	2,614	2,775	2,908	2,301	2,844	2,628	2,888	2,775	2,764	1,892

[1]Percentages based on number of respondents indicating frequency of their purchases.

[2]Frequency of purchase per year.

Table 4.--Usual place of purchase of selected food items[1]

Place usually purchased	Beef-steak	Bacon	Eggs	Butter	White bread
Supermarket					
Number purchasing	1,866	2,154	1,915	1,828	1,994
Percent	71.5	77.6	65.8	79.4	70.1
Neighborhood store					
Number purchasing	712	594	758	375	778
Percent	27.3	21.4	26.1	16.3	27.4
Home delivery					
Number purchasing	30	23	230	89	62
Percent	1.2	0.8	7.9	3.9	2.2
No answer/Don't know					
Number	6	4	5	9	10
Percent	0.2	0.2	0.2	0.4	0.3
Total buying					
Number	2,614	2,775	2,908	2,301	2,844
Percent	100.0	100.0	100.0	100.0	100.0

	Marga-rine	Fresh milk	Fresh potatoes	Fresh apples	Whole turkey
Supermarket					
Number purchasing	2,131	1,479	2,171	2,060	1,466
Percent	81.1	51.2	78.2	74.5	77.5
Neighborhood store					
Number purchasing	456	690	576	669	409
Percent	17.4	23.9	20.8	24.2	21.6
Home delivery					
Number purchasing	35	714	23	22	14
Percent	1.3	24.7	0.8	0.8	0.7
No answer/Don't know					
Number	6	5	5	13	3
Percent	0.2	0.2	0.2	0.5	0.2
Total buying					
Number	2,628	2,888	2,775	2,764	1,892
Percent	100.0	100.0	100.0	100.0	100.0

[1]Percentages based on number of respondents buying each commodity.

that the color of meat and poultry does not vary sufficiently for consumers to discriminate among offerings on that basis.

The same conclusion cannot be drawn for fresh produce. More than twice as many consumers reported looking for color of fresh potatoes and fresh apples than for the next highest food item. It must, therefore, be concluded that the color of retail offerings of fresh potatoes and apples varies significantly and that consumers are relatively interested in the color of fresh produce.

Eggs and beefsteak (29 and 26 percent) were the only two food items for which significant numbers of respondents reported looking at the grade before buying. Six to seven percent of the buyers of bacon, butter, fresh milk, fresh potatoes, and whole turkey reported looking at the grade.

Only 11 percent of the buyers reported looking for Government inspected beefsteak and no more than 4 percent looked for inspected offerings of the other commodities.

As might be expected, price was frequently sought information. Even so, less than one-half the buyers reported looking at the package or label to obtain price information.

Thirty-eight percent of the buyers reported looking for size for eggs. Whole turkey followed with 18 percent.

Weight was important only for beefsteak and whole turkey.

Presumably, the information sought by consumers on labels or packages indicates the characteristics sought in the food which they purchase. If so, there was no consensus as to desirable characteristics for food products. Indeed, it appears that there is considerable heterogeneity among consumer preferences.

CONSUMER KNOWLEDGE OF GRADES

Existence of Government Grades

Respondents were asked if Government grades for the food items they purchased existed. Most respondents stated that Government grades exist for beefsteak (89.7 percent), whole turkey (82.6 percent), eggs (71.3 percent), and fresh milk (70.0 percent) (table 6). Many respondents also believed that Government grades existed for bacon (70.2 percent) and fresh milk (70.0 percent). Since the term Grade A is commonly used in connection with fresh milk, it is understandable that consumers would believe that a Government grade for milk exists.

The high proportion of respondents who stated that a Government grade for bacon existed is more difficult to explain. Possibly, a "halo effect" exists. The consumer reasons that since some beef is graded all meat is graded. During the interviews, several respondents were reported asking, "Aren't all foods graded by the Government?" This would tend to indicate that the halo effect is fairly widespread.

White bread was the only food item that a large proportion of the respondents did not believe to be Government graded. However, a majority of homemakers indicated that they were not sure if white bread was graded.

The large number of incorrect or "don't know" responses for all food items, except beefsteak, seems to indicate a general lack of awareness about Government grades. Many of the correct responses for the graded food items may not indicate knowledge, but demonstrate the belief that all foods are graded.

Table 5.--Respondents reporting looking at food package or label to obtain various kinds of information

Information sought	Beef-steak	Bacon	Eggs	Butter	White bread	Marga-rine	Fresh milk	Fresh pota-toes	Fresh apples	Whole turkey
Buyers of each item										
Number	2,614	2,775	2,908	2,301	2,844	2,628	2,888	2,775	2,764	1,892
Percent of total sample	86.7	92.1	96.5	76.3	94.4	87.2	95.8	92.1	91.7	62.8
Looked at label										
Number	1,841	2,068	2,035	1,644	2,065	2,010	1,858	1,618	1,684	1,519
Percent of total sample	61.1	68.6	67.5	54.5	68.5	66.7	61.6	53.7	55.9	50.4
Percent of buyers	70.4	74.5	70.0	71.4	72.6	76.5	64.3	58.3	60.9	80.3
Looked for date										
Number	---	---	215	38	226	18	146	---	---	80
Percent of total sample	---	---	7.1	1.3	7.5	0.6	4.8	---	---	2.7
Percent of buyers	---	---	7.4	1.7	7.9	0.7	5.1	---	---	4.2
Looked for brand										
Number	236	1,176	318	1,143	1,500	1,465	1,252	476	641	769
Percent of total sample	7.8	39.0	10.6	37.9	49.8	48.6	41.5	15.8	21.3	25.5
Percent of buyers	9.0	42.4	10.9	50.0	52.7	55.7	43.4	17.2	23.2	40.6
Looked for color										
Number	---	---	106	34	20	21	---	220	275	---
Percent of total sample	---	---	3.5	1.1	0.7	0.7	---	7.3	9.1	---
Percent of buyers	---	---	3.6	1.5	0.7	0.8	---	7.9	9.9	---
Looked for grade										
Number	669	172	847	156	22	48	193	215	125	143
Percent of total sample	22.2	5.7	28.1	5.2	0.7	1.6	6.4	7.1	4.2	4.8
Percent of buyers	25.6	6.2	29.1	6.8	0.8	1.8	6.7	7.7	4.5	7.6
Looked for ingredients										
Number	---	---	---	112	161	286	204	---	---	---
Percent of total sample	---	---	---	3.7	5.3	9.5	6.8	---	---	---
Percent of buyers	---	---	---	4.9	5.7	10.9	7.1	---	---	---
Looked for inspection										
Number	296	102	33	26	17	19	21	35	34	85
Percent of total sample	9.8	3.4	1.1	0.9	0.6	0.6	0.7	1.2	1.1	2.8
Percent of buyers	11.3	3.7	1.1	1.1	0.6	0.7	0.7	1.3	1.2	4.5
Looked for price										
Number	1,075	727	478	382	279	427	180	358	341	466
Percent of total sample	35.7	24.1	15.9	12.7	9.3	14.2	6.0	11.9	11.3	15.5
Percent of buyers	41.1	26.2	16.4	16.6	9.8	16.2	6.2	12.9	12.3	24.6
Looked for size										
Number	131	64	1,113	28	129	17	29	343	234	342
Percent of total sample	4.4	2.1	36.9	0.9	4.3	0.6	1.0	11.4	7.8	11.4
Percent of buyers	5.0	2.3	28.3	1.2	4.5	0.6	1.0	12.4	8.5	18.1
Looked for weight										
Number	708	258	---	52	99	42	---	159	100	538
Percent of total sample	23.5	8.6	---	1.7	3.3	1.4	---	5.3	3.3	17.9
Percent of buyers	27.1	9.3	---	2.3	3.5	1.6	---	5.7	3.6	28.4
Looked for type										
Number	278	168	7	65	103	87	169	364	553	141
Percent of total sample	9.2	5.6	0.2	2.2	3.4	2.9	5.6	12.1	18.4	4.7
Percent of buyers	10.6	6.1	0.2	2.8	3.6	3.3	5.9	13.1	20.0	7.5
Looked for other										
Number	101	329	59	18	20	13	65	102	84	156
Percent of total sample	3.4	10.9	2.0	0.6	0.7	0.4	2.2	3.4	2.8	5.2
Percent of buyers	3.9	11.9	2.0	0.8	0.7	0.5	2.3	3.7	3.0	8.2

Table 6.--Responses to questions (1) Is there a Government grade? (2) Do you usually buy Government graded selected food items?

Food	Unit	(1) Is there a Government grade?				(2) Do you usually buy Government graded?[1]			
		Yes	No	Don't know	Total	Yes	No	Don't know	Total
Beefsteak[2]	No.	2,346	47	221	2,614	2,115	85	146	2,346
	Pct.	89.7	1.8	8.5	100.0	90.2	3.6	6.2	100.0
Bacon	No.	1,949	167	659	2,775	1,577	113	259	1,949
	Pct.	70.2	6.0	23.8	100.0	80.9	5.8	13.3	100.0
Eggs[2]	No.	2,074	225	609	2,908	1,645	197	232	2,074
	Pct.	71.3	7.7	21.0	100.0	79.3	9.5	11.2	100.0
Butter[2]	No.	1,430	180	691	2,301	1,143	91	196	1,430
	Pct.	62.1	7.8	30.1	100.0	79.9	6.4	13.7	100.0
White bread	No.	663	725	1,456	2,844	452	68	143	663
	Pct.	23.3	25.5	51.2	100.0	68.2	10.3	21.5	100.0
Margarine	No.	1,108	407	1,113	2,628	780	94	234	1,108
	Pct.	42.1	15.5	42.4	100.0	70.4	8.5	21.1	100.0
Fresh milk	No.	2,023	233	632	2,888	1,686	98	239	2,023
	Pct.	70.0	8.1	21.9	100.0	83.4	4.8	11.8	100.0
Fresh potatoes[2]	No.	1,276	443	1,056	2,775	942	120	214	1,276
	Pct.	46.0	16.0	38.0	100.0	73.8	9.4	16.8	100.0
Fresh apples[2]	No.	995	573	1,196	2,764	686	141	168	995
	Pct.	36.0	20.7	43.3	100.0	68.9	14.2	16.9	100.0
Whole turkey[2]	No.	1,563	68	261	1,892	1,344	76	143	1,563
	Pct.	82.6	3.6	13.8	100.0	86.0	4.9	9.1	100.0

[1]Question 2 asked only of respondents answering "yes" to question 1.
[2]Food items for which a USDA grade exists.

When respondents who reported a Government grade existed were asked if they bought a graded product, 68 to 90 percent replied that they did, whether or not a Government grade, in fact, exists. Again, this can be ascribed to a halo effect. However, the percentage of "don't know" responses declined when the question related to actual purchases. The smaller percentage of "Yes" responses for fresh apples, compared with beefsteak and whole turkey might be because the grade appears on beefsteak and turkey more often than on apples.

Respondents who reported buying a Government graded product were asked what grade or grades of the product they usually bought (table 7). With the exception of eggs (70 percent correct), less than 50 percent of the responses for each food item correctly identified the grade. Twenty-nine percent of all responses were incorrect, with "don't know" responses accounting for 38 percent. When all commodities were considered, Grade A accounted for 43 percent of all incorrect responses large enough to warrant separate tabulation. The popularity of Grade A as a presumed grade casts some doubt on the "correct" responses for eggs, butter, and whole turkey. Replying "Grade A" for all food items--as many respondents did--would result in correct answers for these food items.

It has been suggested that the existence of several sets of grade names for food items is a source of confusion to consumers. If this were true, we would expect to find consumers applying the same nomenclature to different food items. For example, a consumer who was aware of Prime beef would also ascribe the grade Prime to other food items. With the exception of the general usage of "Grade A," described above, there was no indication that consumers tended to use the nomenclature appropriate to one food item for another.

Grade Awareness

All respondents replying that a Government grade existed for a food item were asked to name the grades for that food item from highest to lowest. These responses were scored by assigning (1) one point for each correct grade regardless of sequence, (2) one point for each pair of correct grades in correct sequence, and (3) one point for each correct grade in the correct position. A response stating that Prime was the highest grade for beefsteak and Choice was the next highest would be graded 5, 1 point each for mentioning Prime and Choice, 1 point for placing Prime before Choice, 1 point for placing Prime in the highest position, and 1 point for placing Choice in the second highest position.

Five grades were allowed for beefsteak and three for each of the remaining graded food items. A total of 14 points for beefsteak and 8 points for each of the other graded food items could, therefore, have been scored.

Fresh milk is not graded by USDA. To merit the Grade A designation, fluid milk must meet local or State requirements for sanitation in production and handling. These requirements are usually based on the Model Milk Ordinance developed by the U.S. Public Health Service. Grade B milk is seldom, if ever, sold for consumption in fluid form, but is used in manufactured dairy products. Therefore, it was believed that most consumers would know only of Grade A milk and a grade awareness score was not computed for fresh milk.

Even though there is more than one Federal grade for fresh potatoes, fresh apples, and whole turkey, consumers usually see only the highest grade in stores. Therefore, it was anticipated that the most frequent scores for these commodities would be 1 or 2.

Over half the respondents received zero scores for the commodities considered in the study (table 8), except for eggs (36.5 percent with a zero score).

Table 7.--Responses to the question "What grade do you usually buy?"[1]

Food	Unit	Grade correctly identified	Incorrect identification, excluding Grade A	Incorrect, Grade A	Don't know	Total
Beefsteak[2]	No.	658	346	487	624	2,115
	Pct.	31.1	16.4	23.0	29.5	100.0
Bacon	No.	---	386	371	820	1,577
	Pct.	---	24.5	23.5	52.0	100.0
Eggs[2]	No.	1,150	209	---	286	1,645
	Pct.	69.9	12.7	---	17.4	100.0
Butter[2]	No.	549	168	---	426	1,143
	Pct.	48.0	14.7	---	37.3	100.0
White bread	No.	---	73	96	283	452
	Pct.	---	16.2	21.2	62.6	100.0
Margarine	No.	---	144	199	437	780
	Pct.	---	18.5	25.5	56.0	100.0
Fresh milk[3]	No.	819	244	---	623	1,686
	Pct.	48.6	14.5	---	36.9	100.0
Fresh potatoes[2]	No.	250	118	207	367	942
	Pct.	26.5	12.5	22.0	39.0	100.0
Fresh apples[2]	No.	105	102	179	300	686
	Pct.	15.3	14.9	26.1	43.7	100.0
Whole turkey[2]	No.	491	253	---	600	1,344
	Pct.	36.5	18.8	---	44.7	100.0

[1]Asked only of respondents who reported purchasing a Government graded commodity.
[2]Food items for which a USDA grade exists.
[3]Although not a USDA grade for milk, Grade A was considered to be a correct response.

Table 8.--Frequency distribution of grade awareness scores, food items[1]

Grade awareness score	Beefsteak		Eggs		Butter	
	No.	Pct.	No.	Pct.	No.	Pct.
Eligible respondents	2,346	100.0	2,073	100.0	1,430	100.0
0[2]	1,523	64.9	756	36.5	913	63.8
1	214	9.1	472	22.8	280	19.6
2	173	7.4	145	7.0	66	4.6
3	113	4.8	413	19.9	89	6.2
4	24	1.0	10	0.5	3	(3)
5	189	8.0	172	8.3	56	3.9
6	28	1.2	1	(3)	---	---
7	2	(3)	---	---	---	---
8	60	2.6	104	5.0	23	1.6
9	13	0.6	NA	NA	NA	NA
10	2	(3)	NA	NA	NA	NA
11	5	(3)	NA	NA	NA	NA
12	---	---	NA	NA	NA	NA
13	---	---	NA	NA	NA	NA
14	---	---	NA	NA	NA	NA
Don't know	989	42.2	542	26.1	817	57.1

	Fresh potatoes		Fresh apples		Whole turkey	
	No.	Pct.	No.	Pct.	No.	Pct.
Eligible respondents	1,276	100.0	995	100.0	1,563	100.0
0[2]	978	76.6	873	87.7	1,078	69.0
1	289	22.6	111	11.2	30	1.9
2	9	0.7	7	0.7	297	19.0
3	---	---	1	(3)	11	0.7
4	---	---	---	---	1	(3)
5	---	---	3	(3)	66	4.2
6	---	---	---	---	---	---
7	---	---	---	---	---	---
8	---	---	---	---	80	5.1
9	NA	NA	NA	NA	NA	NA
10	NA	NA	NA	NA	NA	NA
11	NA	NA	NA	NA	NA	NA
12	NA	NA	NA	NA	NA	NA
13	NA	NA	NA	NA	NA	NA
14	NA	NA	NA	NA	NA	NA
Don't know	738	57.8	662	66.5	897	57.4

[1]Possible scores: Beefsteak - 14, other food items 8.
[2]Includes "don't know" responses.
[3]Less than 0.5 percent.
NA - not applicable.

Except for whole turkey, the most frequent score greater than zero--as anticipated--was 1, indicating that a relatively large number of respondents knew, at most, one correct grade. The most frequent score greater than zero for whole turkey was 2.

Only food items for which Grade A was a correct response show perfect scores.

Place of Purchase

The advertising emphasis of some chain stores is placed on federally graded food items, so consumers who usually purchased from chain stores might be more aware of grades than those purchasing from neighborhood stores. Table 9 does not support such a view. Grade awareness scores of supermarket and neighborhood store patrons differed by only negligible amounts. The chi-square values associated with these data indicated no significant interdependence between place of purchase and grade awareness.

Frequency of Purchase

It might be expected that buying frequency would be closely related to grade awareness. Buying is a learning experience; thus, a relatively large number of learning experiences could be expected to result in relatively greater knowledge. This hypothesis is borne out for milk as shown below, where distribution of correct terminology reported for whole milk was:

Purchases per month				
1	2	3	4	5 and more
Percent				
1.5	2.6	1.0	27.2	67.7

The assumed relationship between frequency of purchase and grade awareness did not prove correct for the other food items. Table 10 shows that respondents who frequently purchased food items other than milk had no tendency toward higher awareness scores. The relationship between grade awareness and frequency of purchase was tested with the chi-square statistic. The tests revealed no interrelation between the two attributes.

Age

Respondents under 25 years of age showed substantially higher grade awareness scores for beefsteak, butter, and turkey than respondents of 55 years and over (table 11). The chi-square statistics associated with the data in table 12 showed more than chance relationships between age and grade awareness, but did not reveal age to be a strong determinant of awareness. Chi-square statistics showed no probability of interdependence between the two attributes above 85 percent.

Respondents under 25 years of age also showed a much greater knowledge of "Grade A" milk than did older respondents. For fresh milk, the chi-square statistics indicated interdependence between age and grade awareness at the 99.9 percent level.

As previously indicated, the large number of correct responses for milk might be due to a widespread belief that "Grade A" is the best. It is also possible that young

Table 9.--Distribution of grade awareness scores by usual place of purchase[1]

Commodity and usual place of purchase	Consumer awareness score range				
	1 - 5	6 - 10	11 - 14	Total	
	Percent				Number
Beefsteak					
Supermarket	86.9	12.5	0.5	100.0	574
Neighborhood store	86.3	12.9	0.8	100.0	241
	Consumer awareness score range				
	1 - 3	4 - 6	7 - 8	Total	
	Percent				Number
Fresh eggs					
Supermarket	78.3	14.0	7.6	100.0	940
Neighborhood store	79.4	12.2	8.4	100.0	286
Butter					
Supermarket	83.9	11.5	4.6	100.0	417
Neighborhood store	87.6	8.6	3.7	100.0	81
Fresh potatoes					
Supermarket	100.0	---	---	100.0	227
Neighborhood store	100.0	---	---	100.0	68
Fresh apples					
Supermarket	98.8	(2)	---	100.0	87
Neighborhood store	94.3	5.7	---	100.0	35
Whole turkey					
Supermarket	68.9	14.5	16.6	100.0	386
Neighborhood store	72.6	11.6	15.8	100.0	95

[1]Totals may not equal 100 percent due to rounding.

[2]Less than 0.5 percent.

Table 10.--Distribution of grade awareness scores by frequency commodity is purchased[1]

Commodity and purchases per month	Grade awareness score range			
	1 - 5	6 - 10	11 - 14	Total
	Percent			
Beefsteak				
1	86.3	11.6	2.0	100.0
2	87.0	13.0	---	100.0
3	83.6	16.4	---	100.0
4	88.1	11.9	---	100.0
5 and more	85.4	13.3	1.3	100.0
	Grade awareness score range			
	1 - 3	4 - 6	7 - 8	Total
	Percent			
Fresh eggs				
1	77.5	16.2	6.2	100.0
2	79.4	10.5	1.0	100.0
3	80.0	12.7	7.3	100.0
4	78.5	14.0	7.5	100.0
5 and more	75.3	17.4	7.4	100.0
Butter				
1	79.2	16.8	4.0	100.0
2	82.1	10.7	7.1	100.0
3	87.5	6.2	6.2	100.0
4	86.7	10.0	3.2	100.0
5 and more	88.2	5.9	5.9	100.0
Whole turkey				
1	70.2	18.3	11.4	100.0
2	70.1	12.6	17.2	100.0
3	72.9	12.9	14.1	100.0
4	62.7	9.8	27.4	100.0
5 and more	66.7	12.8	20.5	100.0

[1]Totals may not equal 100 percent due to rounding.

Table 11.--Distribution of grade awareness scores, selected commodities, by age of respondent[1]

Commodity and consumer awareness score ranges	Age				
	Under 25	25 - 34	35 - 44	45 - 54	55 and over
	Percent				
Beefsteak					
1-5	81.4	85.6	86.0	87.1	90.0
6-10	15.3	13.9	13.5	12.4	10.0
11-14	3.4	0.5	0.5	0.5	---
Total	100.0	100.0	100.0	100.0	100.0
Fresh eggs					
1-3	76.9	77.6	77.7	80.5	78.1
4-6	16.7	12.4	13.9	12.4	15.4
7-8	6.5	10.0	8.4	7.1	6.5
Total	100.0	100.0	100.0	100.0	100.0
Butter					
1-3	77.6	82.7	84.1	83.5	90.4
4-6	16.3	11.8	8.7	13.8	9.6
7-8	6.1	5.5	7.2	2.8	---
Total	100.0	100.0	100.0	100.0	100.0
Whole turkey					
1-3	62.5	66.4	69.2	67.2	81.5
4-6	12.5	12.1	16.4	17.6	6.2
7-8	25.0	21.5	14.4	15.1	12.3
Total	100.0	100.0	100.0	100.0	100.0

[1]Totals may not add to 100 percent due to rounding.

Table 12.--Distribution of respondents reporting usually buying Grade A, selected commodities, by age group of respondent[1]

Food	Age									
	Under 25		25 - 34		35 - 44		45 - 54		55 and over	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Beefsteak	65	46.1	132	40.0	105	30.0	91	27.2	93	27.9
Bacon	44	62.9	100	61.3	94	53.1	65	38.9	67	36.6
White bread	11	91.7	20	69.0	25	71.4	19	52.8	21	36.2
Margarine	18	81.8	42	68.9	52	72.2	44	53.0	43	41.0
Fresh potatoes	14	45.2	41	42.7	55	39.3	44	32.4	53	30.8
Fresh apples	16	66.7	36	63.2	41	48.2	41	44.1	45	35.4

[1]Percentages based on the number of respondents in a given age group who reported buying a graded offering of the food item.

mothers (who are likely to account for a significant number of the under-25 sample population) are not simply aware of "Grade A" milk, but that a "halo effect" causes them to believe that "Grade A" means the highest quality for all food. Table 12 supports this possibility: the youngest group has a much greater propensity to ascribe "Grade A" to bacon, white bread, and margarine. Statistical tests show a strong relationship between respondents' age and response pattern for bacon, white bread, and margarine. The chi-square statistics associated with these data indicate less than 1 chance in 1,000 that a relationship does not exist between age and propensity to report Grade A as the highest grade.

Education

Grade awareness scores were generally higher for respondents who had completed 1 year or more of education beyond grammar school (table 13). The chi-square statistics associated with these data showed education and grade awareness to be significantly related as follows:

Food item	Level of significance Percent
Beefsteak	99
Fresh eggs	99
Butter	98
Turkey	86

Data for the remaining food items were not suitable for the chi-square test.

Respondents who had completed at least 1 year of college tended to obtain higher grade awareness scores than those who had completed 1 or more years of high school. These differences were not as great, however, as the difference in scores exhibited between the high school and grammar school groups.

Similar relationships were found between grade awareness scores and income of the responding household. These data are not shown, however, because a close, positive correlation is known to exist between education and income. The existence of this correlation would, in this case, result in an observed correlation between income and grade awareness.

Identification of the Grademark

A list of shapes (circle, square, triangle, shield) was read to each respondent, who was then asked to state which, if any, of the shapes was the USDA grademark. The same technique was employed for identification of the USDA inspection mark.

Nearly 38 percent of all responses were in the "don't know" category. Replies to the question "The USDA grademark is a ....?" were:

Shape	Replies Number	Percent
Circle	874	29.5
Triangle	223	7.4
Shield	648	21.5
Square	85	2.8
Other	46	1.5
Don't know	1,138	37.8
Total	3,014	100.0

Table 13.--Distribution of grade awareness scores by level of education[1]

Commodity and grade awareness score	Last grade completed in--			Commodity and grade awareness score	Last grade completed in--		
	Grammar school	High school	College		Grammar school	High school	College
	Percent				Percent		
Beefsteak				Butter			
1-5	94.3	88.5	82.0	1-3	92.6	84.8	76.6
6-10	5.7	10.8	17.3	4-6	6.2	10.6	16.9
11-14	--	0.7	0.7	7-8	1.2	4.5	6.5
Total	100.0	100.0	100.0	Total	100.0	100.0	100.0
Fresh eggs				Whole turkey			
1-3	87.6	77.7	72.4	1-3	77.7	66.8	71.1
4-6	7.5	15.0	16.0	4-6	13.8	14.7	10.3
7-8	4.9	7.3	11.6	7-8	8.5	18.5	18.6
Total	100.0	100.0	100.0	Total	100.0	100.0	100.0

[1/] Totals may not add to 100 percent due to rounding.

Only about 22 percent of the responses were correct, and a circle was most often given as the USDA grademark. It appears, based on this evidence, that grade and inspection marks are often confused in the consumer's mind, and that he has little knowledge of Federal grade nomenclature or the grademark symbol. On the other hand, the majority believed that food is federally graded and many believe that Grade A is the best. This latter belief is probably reinforced or possibly caused by the colloquial expression "Grade A," meaning "of excellent quality."[3]

Factors Influencing Identification of the USDA Grademark

Grade Awareness Scores

It seemed reasonable to assume that most respondents who correctly identified the USDA grademark would also attain relatively high grade awareness scores. The data indicate that there is some validity in this assumption, but a general confusion between the USDA grade and inspection marks is more evident (table 14).

For butter and fresh eggs, more than half of the respondents in the highest range of awareness scores correctly identified the USDA grademark. Forty-two percent in the highest range of awareness scores for one or more food items also correctly identified the grademark. However, 43 percent of all respondents scoring in the upper range of awareness scores for one or more food items wrongly identified the circle--the inspection symbol--as the grademark.

Education

Correct identification of the grademark was closely related to respondent's level of education (table 15). Persons who had attended college were much more likely to

[3/] An American History of Slang, Joseph A. Weingarten, New York, N.Y., 1954.

Table 14.--Distribution of grade awareness scores, by commodity and symbol reported as the USDA grademark

Commodity and symbol reported	Grade awareness score range					
	1 - 5		6 - 10		11 - 14	
	No.	Pct.	No.	Pct.	No.	Pct.
Beefsteak:						
Shield	217	43.0	45	52.9	1	20.0
Circle	210	41.6	25	29.4	4	80.0
Triangle	49	9.7	3	3.5	---	---
Square	17	3.4	5	5.9	---	---
Other	11	2.3	7	8.2	---	---
None	1	[2]	---	---	---	---
Total	505	100.0	85	100.0	5	100.0
	1 - 3		4 - 6		7 - 8	
Butter:						
Shield	113	34.3	24	54.5	10	52.6
Circle	147	44.7	11	25.0	7	36.8
Triangle	40	12.2	6	13.6	2	10.5
Square	14	4.2	2	4.5	---	---
Other	13	4.0	1	2.3	---	---
None	2	0.6	---	---	---	---
Total	329	100.0	44	100.0	19	100.0
Fresh eggs:						
Shield	258	34.2	51	42.8	38	53.5
Circle	351	46.6	54	45.4	27	38.0
Triangle	89	11.8	7	5.9	3	[1]
Square	31	4.1	3	2.5	1	[1]
Other	21	2.8	4	3.4	2	[1]
None	4	0.5	---	---	---	---
Total	754	100.0	119	100.0	71	100.0
Turkey:						
Shield	87	36.7	12	21.4	19	28.8
Circle	110	46.4	35	62.5	32	48.5
Triangle	23	9.7	4	7.1	6	9.1
Square	9	3.8	3	5.4	8	12.1
Other	8	3.4	2	3.6	1	1.5
None	---	---	---	---	---	---
Total	237	100.0	56	100.0	66	100.0

[1]Percentages may not add to 100 percent due to rounding.
[2]Less than 0.5 percent.

Table 15.--Distribution of respondents reporting the USDA grade mark to be a selected symbol by education of respondent, number and percent[1]

Symbol	Last grade completed in --					
	Grammar school		High school		College	
	No.	Pct.	No.	Pct.	No.	Pct.
Shield	82	22.0	376	34.6	187	45.3
Circle	181	48.5	528	48.6	156	37.8
Triangle	58	15.5	122	11.2	42	10.2
Square	33	8.8	35	3.2	17	4.1
Other	15	4.0	21	1.9	10	2.4
None	4	1.1	4	(2)	1	(2)
Total	373	100.0	1,086	100.0	413	100.0

[1]Percentages may not add to 100 due to rounding.
[2]Less than 0.5 percent.

Table 16.--Helpfulness of Government grades, rated for selected food items[1]

Commodity	Unit	Not at all helpful 1	2	3	4	Very helpful 5	Don't know	Total
Beefsteak	No.	18	10	39	64	643	49	823
	Pct.	2.2	1.2	4.7	7.8	78.1	6.0	100.0
Eggs	No.	30	23	77	121	857	209	1,317
	Pct.	2.3	1.7	5.8	9.2	65.1	15.9	100.0
Butter	No.	13	11	33	59	355	46	517
	Pct.	2.5	2.1	6.4	11.4	68.7	8.9	100.0
Fresh potatoes	No.	16	17	37	38	178	12	298
	Pct.	5.4	5.7	12.4	12.8	58.7	4.0	100.0
Fresh apples	No.	8	9	3	13	82	7	122
	Pct.	6.6	7.4	2.5	10.6	67.2	5.7	100.0
Whole turkey	No.	7	4	15	43	392	24	485
	Pct.	1.4	0.8	3.1	8.9	80.9	4.9	100.0

[1]Asked only of respondents with a grade awareness score of 1 or greater. Helpfulness was rated on a scale of 1 through 5.

correctly identify the USDA grademark than those with lower levels of education. However, less than half the respondents who had attended college correctly identified the grademark, and 38 percent confused the grade and inspection marks. The chi-square statistics associated with these data indicate interdependence among categories at the 99.9 percent level. In calculating this statistic, responses of "none" were omitted.

Helpfulness of Government Grades

Respondents were asked to rate the helpfulness of Government grades on a scale of 5 through 1, where 5 was "very helpful" and 1 was "not at all helpful." Only respondents with grade awareness scores above zero were questioned.

Between 60 and 81 percent of the eligible respondents rated Government grades as "very helpful," varying by commodities (table 16). Grades appear to be most helpful for beefsteak and whole turkey, and least helpful for fresh potatoes.

Despite the low level of grade awareness exhibited by most respondents, housewives who know and use Government grades apparently find them a valuable aid in purchasing foods.

Scores of Grade Knowledge

Of the 648 who correctly identified the USDA grademark, nearly one-third listed "shopping" as the source of their knowledge (table 17). Of the same 648, 19 percent named school or college and 31 percent named newspapers, magazines, and pamphlets as the source of their knowledge. Without more evidence, these sources might be classified as good sources. However, of the 874 respondents who named the circle as the USDA grademark, 28 percent named shopping as the source of their knowledge. Of the same 874, 15 percent named school or college and 23 percent named newspapers, magazines, and pamphlets as the source of their knowledge. The existing confusion does not appear related to information media cited as a source of knowledge.

Replies to the source of grade knowledge question chiefly indicate media to which housewives look for information. Judging by the relatively large number of times that shopping was listed as the source of knowledge concerning grades, consumer information programs likely could be made more effective if the information were presented in the shopping place. This would insure wide coverage of consumers and present the information when the consumer is actively seeking it in preparation for making a purchase.

MOST EASILY UNDERSTOOD GRADE

Respondents were asked if grades expressed in numbers, letters, or words would be most easily understood by them. No general preference was seen in the responses as none of the three categories accounted for as much as 50 percent (table 18).

At variance with a similar question in a previous study, letters were slightly preferred over words.[4] In that study, 56 percent of the respondents preferred words, while 30 and 5 percent preferred letters and numbers.

4/ Knott, E.M., Homemakers' Opinions About and Preferences For Broiler-Fryers and Turkeys, MRR 760, U.S. Dept. Agr., July 1966.

Table 17.--Source of knowledge of grades, source categories, by grade symbol respondents said has used by U.S.D.A., number and percent[1]

Grademark reported	Unit	Newspapers	Magazines and pamphlets	Radio/TV	School/college	Friends	Relatives	Personal experience	Shopping	Other	Don't know	No answer
Circle	No.	129	105	42	130	37	71	76	248	14	16	7
	Pct.	31.1	31.9	36.2	36.5	33.0	40.1	37.8	29.2	33.3	30.2	50.0
Triangle	No.	29	26	8	23	10	11	15	62	2	4	---
	Pct.	7.0	7.9	6.9	6.5	8.9	6.2	7.5	7.3	4.8	7.5	---
Shield	No.	103	100	28	122	28	41	46	202	14	8	1
	Pct.	24.8	30.4	24.1	34.3	25.0	23.2	22.9	23.8	33.3	15.1	7.1
Square	No.	10	10	2	9	4	7	5	23	---	2	3
	Pct.	2.4	3.0	1.7	2.5	3.6	4.0	2.5	2.7	---	3.8	21.4
Other	No.	4	4	4	6	4	2	6	19	1	1	1
	Pct.	1.0	1.2	3.4	1.7	3.6	1.1	3.0	2.2	2.4	1.9	7.1
None	No.	1	2	---	---	---	---	---	2	1	---	---
	Pct.	(2)	0.6	---	---	---	---	---	(2)	2.4	---	---
Don't know	No.	139	82	32	66	29	45	53	292	10	22	2
	Pct.	33.5	24.9	27.6	18.5	25.9	25.4	26.4	34.4	23.8	41.5	14.3
Total	No.	415	329	116	356	112	177	201	848	42	53	14
	Pct.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1]Total number of responses does not equal total number of respondents, as many respondents named more than 1 source.

[2]Less than 0.5 percent.

The small group favoring letters over words does not justify a conclusion that consumers prefer letter grades over word grades, but number grades clearly are not favored by consumers. This may be caused by the inconsistent way numbers are used in our society. We speak of first quality goods, equating the lowest number with the highest quality, but assign increasing numeric scores to schoolwork.

Table 18.--Replies to the question: Which of the following 3 Government grades, if any, would be easiest for you to understand?

Type of grade	Replies	
	Number	Percent
Letters	1,315	43.6
Words	952	31.6
Numbers	550	18.2
No opinion	189	6.3
No answer	8	(1)
Total	3,014	99.7

1/Less than 0.5 percent.

IMPORTANCE OF BRAND NAME

Conceptually brand names may fulfill some of the same functions as consumer grades. Owners of brand names frequently make such a claim, arguing that the brand name becomes associated in the consumer's mind with a consistently high-quality product. Some others believe that brand names are often used to facilitate nonprice competition. Such competition, they claim, often takes the form of attempting to modify the consumer's preferences to suit the product rather than the reverse. Such practices would result in additional social costs stemming from misallocation of resources.[5]

An empirical proof of either claim was beyond the scope of this study, but an attempt was made to assess the importance consumers place on brand names. Respondents were asked to rate the importance of brand names for the products they bought on a scale from 5 through 1, where 5 was "very important" and 1 was "not at all important."

More respondents reported brand name to be "very important" for fresh milk than for any other food item (table 19). Six of the 10 food items considered were grouped in an 8-point spread--48 to 55 percent of the respondents rated brand name "very important" for these commodities. Brand names for fresh potatoes and fresh apples were least frequently rated "very important," and about the same number of respondents rated brand names for these two commodities "not at all important" and "very important."

5/Farris, Paul L., "Uniform Grades and Standards, Product Differentation and Product Development," Jour. Farm Econ., Feb. 1960, pp. 854-863.

Table 19.--Importance of rating brand names for selected food items bought

Response		Beefsteak		Bacon		Eggs		Butter		White bread	
		No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Rating:[1]											
Very important	5	1,190	48.1	1,432	52.4	1,139	40.5	1,225	54.2	1,457	52.0
	4	274	11.1	454	16.6	308	11.0	324	14.3	379	13.5
	3	296	12.0	411	15.0	461	16.4	332	14.6	455	16.2
	2	102	4.1	152	5.6	203	7.2	141	6.2	168	6.0
Not at all important	1	612	24.7	282	10.3	699	24.9	241	10.7	345	12.3
Total rating		2,474	100.0	2,731	100.0	2,810	100.0	2,262	100.0	2,804	100.0
No response[2]		140	5.4	44	1.6	98	3.4	39	1.7	40	1.4
Total buying		2,614	---	2,775	---	2,908	---	2,301	---	2,844	---

		Margarine		Fresh milk		Fresh potatoes		Fresh apples		Whole turkey	
		No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Rating:[1]											
Very important	5	1,248	48.1	1,791	63.0	762	28.4	902	33.9	1,014	54.8
	4	399	13.1	319	11.2	280	10.4	315	11.8	254	13.7
	3	441	17.0	276	9.7	547	20.4	458	17.2	232	12.5
	2	213	8.2	93	3.3	272	10.1	204	7.7	72	3.9
Not at all important	1	356	13.7	364	12.8	825	30.7	785	29.5	279	15.1
Total rating		2,597	100.0	2,843	100.0	2,686	100.0	2,664	100.0	1,851	100.0
No response[2]		31	1.2	45	1.6	89	3.2	100	3.6	41	2.2
Total buying		2,628	---	2,888	---	2,775	---	2,764	---	1,892	---

[1]Percentages based on number rating brand name.

[2]Percentages based on number of respondents buying each commodity.

Fresh potatoes and fresh apples are often displayed loose in bins without a brand name. Such a retailing practice is not conducive to establishing a link between brand name and food item in the consumer's mind.

CONSUMER KNOWLEDGE OF USDA INSPECTION MARK

Identification

Forty-two percent of the eligible respondents stated that they did not know what the USDA inspection mark was, and another 29 percent incorrectly identified it. Thus, 30 percent correctly identified it (table 20). The shield was incorrectly identified as the inspection mark by 19 percent of the respondents.

Factors Influencing Identification

Education

It might be expected that the better educated respondents would be more likely to correctly identify the USDA inspection mark. Such was the case for the USDA grade mark. However, the college group showed a lower propensity to correctly identify the inspection mark than the other two groups (table 21). The high school group was the only group in which more than 50 percent of the respondents correctly identified the USDA inspection mark. Chi-square tests indicate that identification of the USDA inspection mark is interdependent with respondent's education at the 99.9 percent level, (responses of "none" were not included in calculating the chi-square statistic).

Grade Awareness Scores

It might also be expected that respondents with relatively high grade awareness scores would show a greater tendency to correctly report the shape of the USDA inspection mark. The results do not support such a conclusion (table 22). Respondents receiving a grade awareness score greater than zero correctly reported the inspection mark relatively more frequently than did the entire sample as shown below:

Beefsteak	50.4	Fresh potatoes	51.3
Fresh eggs	52.7	Fresh apples	45.9
Butter	48.2	Turkey	51.2

Grade awareness and knowledge of the inspection mark seemed positively related, although some respondents with relatively high grade awareness scores were unable to identify the USDA inspection mark.

Purpose of USDA Inspection

In sharp contrast to the lack of awareness about names and appearance of the grade and inspection marks, nearly 80 percent of the respondents gave correct or partly correct answers to the question: What is Government inspection of meat and poultry for? (table 23). In another study, 47 and 31 percent, of the respondents gave correct or partly correct replies to a similar question.[6] Since any mention of sanitation,

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6/ Weidenhamer, M., Knott, E.M., and Sherman, L.R., Homemakers' Opinions About Selected Meats. U.S. Dept. Agr. Mktg. Res. Rpt. 854, July 1969, p. 22.

Table 20.--Number and percentage of respondents who replied that the USDA inspection mark is a . . .[1]

Inspection mark shape	Number replying	Percentage replying
	Number	Percent
Circle	895	29.7
Triangle	160	5.3
Shield	562	18.6
Square	90	3.0
Other	59	2.0
None	8	(2)
Don't know	1,265	42.0
Total queried	3,014	100.0

[1]Total number of responses exceeds the number of queries since some respondents gave more than 1 shape in reply.
[2]Less than 0.5 percent.

Table 21.--Distribution of respondents reporting the USDA inspection mark to be a selected symbol, by education of respondent, number, and percent[1]

Symbol reported	Last school grade completed					
	Grammar school		High school		College	
	No.	Pct.	No.	Pct.	No.	Pct.
Circle	166	48.5	542	52.5	178	45.9
Shield	88	25.7	319	30.9	154	39.7
Triangle	40	11.7	90	8.7	29	7.5
Square	27	7.9	47	4.6	16	4.1
Other	15	4.4	32	3.1	11	2.8
None	6	1.8	2	(2)	---	---
Total	342	100.0	1,032	100.0	388	100.0

[1]Percentages may not add to 100 due to rounding.
[2]Less than 0.5 percent.

Table 22.--Distribution of grade awareness scores for selected food items by the symbol reported as the USDA inspection mark[1]

Symbol reported	Grade awareness score ranges					
	1 - 5		6 - 10		11 - 14	
	No.	Pct.	No.	Pct.	No.	Pct.
Beefsteak:						
Circle	237	50.0	35	44.3	3	60.0
Shield	161	34.0	37	46.8	---	---
Triangle	26	5.5	---	---	---	---
Square	28	5.9	4	5.1	2	40.0
Other	20	4.2	3	3.8	---	---
None	2	(2)	---	---	(2)	---
Total	474	100.0	79	100.0	5	100.0
	1 - 3		4 - 6		7 - 8	
Fresh eggs:						
Circle	347	51.2	69	55.6	38	49.3
Shield	217	32.0	36	29.0	23	29.9
Triangle	51	7.5	7	5.6	7	9.1
Square	34	5.0	7	5.6	7	9.1
Other	27	4.0	5	4.0	2	2.6
None	2	(2)	---	---	---	---
Total	678	100.0	124	100.0	77	100.0
Butter:						
Circle	142	48.1	17	41.5	12	57.1
Shield	101	34.2	22	53.6	8	38.1
Triangle	28	9.5	---	---	---	---
Square	13	4.4	1	2.4	1	4.8
Other	11	3.7	1	2.4	---	---
None	1	(2)	---	---	---	---
Total	295	100.0	41	100.0	21	100.0
Turkey:						
Circle	107	47.3	30	57.7	35	53.8
Shield	76	33.6	13	25.0	20	30.8
Triangle	19	8.4	3	5.8	4	6.2
Square	7	3.1	2	3.8	6	9.2
Other	16	7.1	4	7.7	---	---
None	1	(2)	---	---	---	---
Total	226	100.0	52	100.0	65	100.0

[1]Percentages may not add to 100 due to rounding.
[2]Less than 0.5 percent.

cleanliness, or wholesomeness was tabulated as partly correct, undue reliance should not be placed on the partially correct category of this question as a measure of consumer awareness. As previously mentioned, several respondents believed that all food products are federally graded, and considerable confusion between grading and inspection was evident. In addition, the unsanitary condition of some intrastate meat packinghouses received nationwide attention while the study was in progress. A similar question asked in December 1968, 1 year later, might have received many fewer correct responses.

Table 23.--Responses to the question: What is the Government inspection of meat and poultry for?

Item	Correct	Partly correct	Incorrect	No answer	Total queried
Number	1,260	1,069	482	203	3,014
Percent	41.8	35.5	16.0	6.7	100.0

Table 24.--Replies to the question: Are the beefsteak, bacon, turkey, that you buy Government-inspected?

Commodity	Unit	No answer or don't know	Yes	No	Total queried
Beefsteak	No.	273	2,686	55	3,014
	Pct.	9.1	89.1	1.8	100.0
Bacon	No.	402	2,552	60	3,014
	Pct.	13.3	84.7	2.0	100.0
Whole turkey	No.	427	2,534	53	3,014
	Pct.	14.2	84.1	1.7	100.0

Inspection of Meat and Poultry

All participants were asked if the meat and poultry which they buy is Government inspected. Varying with the commodity, 84-89 percent replied "yes" (table 24). Those who replied "no" or "don't know" were asked if meat and poultry were subject to inspection at all. About half the latter group did not know and most of the rest replied "yes" (table 25).

Since most respondents could not identify the inspection mark, the above answers probably represent a belief that all food products are inspected for wholesomeness.

Table 25.--Replies to the question: To your knowledge, is beefsteak, bacon, turkey, Government inspected?[1]

Commodity	Unit	Don't know	Yes	No	Total queried
Beefsteak	No.	163	150	15	328
	Pct.	49.7	45.7	4.6	100.0
Bacon	No.	247	185	30	462
	Pct.	53.5	40.0	6.5	100.0
Turkey	No.	238	210	32	480
	Pct.	49.6	43.7	6.7	100.0

[1]Asked only of respondents replying "no" or "don't know" to the question: Are the beefsteak, bacon, turkey that you buy Government inspected?

CONSUMER AWARENESS QUESTIONNAIRE

ASK TO SPEAK WITH PERSON RESPONSIBLE FOR DECISIONS IN PURCHASING FOOD

Good _____, I'm _____ from Chilton Research Services calling you long distance from Philadelphia. We are conducting a survey among homemakers for the United States Department of Agriculture. We're getting opinions from homemakers across the country about their uses of different food products, and you were selected as part of this cross-section.

(GO TO Q. 1 WITHOUT PAUSING)

CONSUMER AWARENESS QUESTIONNAIRE -- Continued

1. During the past 12 months did you buy any (EACH PRODUCT EXCEPT TURKEY)? (RECORD IN COL. 1 AND ON SLIP SHEET - IF NO PRODUCTS PURCHASED, SKIP TO Q. 4)

2. In an average month, about how often do you usually buy (EACH PRODUCT BOUGHT - Q. 1)? - (RECORD IN COL. 2)

3. Where do you generally buy (EACH PRODUCT PURCHASED) -- at a supermarket, at a small neighborhood store, or is it home-delivered? (RECORD IN COL. 3)

4. During the past 12 months did you buy whole turkey? (RECORD IN COL. 1 AND ON SLIP SHEET) - (IF NONE OF ALL 10 PRODUCTS ARE BOUGHT, SKIP TO Q. 22)

5. How often do you usually buy whole turkey? (RECORD IN COL. 2)

6. Where do you usually buy whole turkey--at a supermarket, small neighborhood store, or is it home-delivered (RECORD IN COL. 3)

Item	Col. 1		Col. 2							Col. 3				
	Q. 1		Q. 2							Q. 3				
	Bought		No. Times Per Month							Where usually Bought				
	Yes	No	1/ Mo.	2/ Mo.	3/ Mo.	4/ Mo.	5 or More/ Mo.	NA	DK	Super-market	Neighborhood Store/Other	Home De-livered	NA	DK
Beefsteak	1	2	1	2	3	4	5	X	V	1	2	3	X	V
Bacon	1	2	1	2	3	4	5	X	V	1	2	3	X	V
Eggs	1	2	1	2	3	4	5	X	V	1	2	3	X	V
Butter	1	2	1	2	3	4	5	X	V	1	2	3	X	V
White bread	1	2	1	2	3	4	5	X	V	1	2	3	X	V
Margarine	1	2	1	2	3	4	5	X	V	1	2	3	X	V
Fresh milk	1	2	1	2	3	4	5	X	V	1	2	3	X	V
Fresh potatoes	1	2	1	2	3	4	5	X	V	1	2	3	X	V
Fresh apples	1	2	1	2	3	4	5	X	V	1	2	3	X	V
	Q. 4		Q. 5							Q. 6				
Whole turkey	1	2						X	V	1	2	3	X	V

7. Let's talk about the various food products you purchase . . .

ASK FOR EACH PRODUCT BOUGHT

When you buy (EACH PRODUCT BOUGHT IN Q. 1 AND Q. 4) do you or do you not look at the package or label to obtain information regarding the product? (RECORD BELOW IN COL. 1)

8. (FOR EACH YES IN Q. 7) What information do you look for? (RECORD BELOW IN COL. 2)

	Col. 1 Q. 7 Look At		Col. 2 Q. 8								
	Yes	No	Brand	Color	Grade	Ingred-ients	Inspec-tion	Price	Size	Weight	Other (SPECIFY)
Beefsteak	1	2	1	2	3	4	5	6	7	8	
Bacon	1	2	1	2	3	4	5	6	7	8	
Eggs	1	2	1	2	3	4	5	6	7	8	
Butter	1	2	1	2	3	4	5	6	7	8	
White bread	1	2	1	2	3	4	5	6	7	8	
Margarine	1	2	1	2	3	4	5	6	7	8	
Fresh milk	1	2	1	2	3	4	5	6	7	8	
Fresh potatoes	1	2	1	2	3	4	5	6	7	8	
Fresh apples	1	2	1	2	3	4	5	6	7	8	
Whole turkey	1	2	1	2	3	4	5	6	7	8	

Now, let's talk about specific things which appear on labels, such as brand name--

9. I'd like to know how you would rate the importance of the brand name for the products you buy. You can rate the importance on a scale from 5 through 1, where 5 means the brand name is very important, and 1 means the brand name is not at all important. Naturally, you may rate it anywhere between 5 and 1, depending on how important you feel the brand name is. Please pick the number that comes closest to how you feel. How important is brand name when you buy (EACH PRODUCT BOUGHT)? (START WITH PRODUCT CHECKED √)

	Very Important				Not At All Imp.	Don't know
Beefsteak	5	4	3	2	1	V
Bacon	5	4	3	2	1	V
Eggs	5	4	3	2	1	V
Butter	5	4	3	2	1	V
White bread	5	4	3	2	1	V
Margarine	5	4	3	2	1	V
Fresh milk	5	4	3	2	1	V
Fresh potatoes	5	4	3	2	1	V
Fresh apples	5	4	3	2	1	V
Whole turkey	5	4	3	2	1	V

Now, let's talk about grades--as you may know, some food products are graded for quality by the U.S. Government.

10. To your knowledge, is there or is there not a Government grade for (EACH PRODUCT BOUGHT)? (RECORD BELOW IN COL.1 AND ON SLIP SHEET--START WITH PRODUCT CHECKED √)

11. (FOR EACH "YES" IN Q. 10, ASK) Do you usually buy Government graded (EACH "Yes")? (RECORD BELOW IN COL. 2)

12. (ASK FOR PRODUCT BOUGHT - Q. 1 AND "YES" IN Q. 11) What Government grades of (EACH PRODUCT BOUGHT Q. 1) do you usually buy? (RECORD IN COL. 3 BELOW) (START WITH CHECKED PRODUCT √)

	Col. 1 Q. 10			Col. 2 Q. 11			Col. 3 Q. 12	
	Yes	No	DK	Yes	No	DK	Grades bought	DK
Beefsteak	1	2	V	1	2	V		V
Bacon	1	2	V	1	2	V		V
Eggs	1	2	V	1	2	V		V
√ Butter	1	2	V	1	2	V		V
White bread	1	2	V	1	2	V	√	V
Margarine	1	2	V	1	2	V		V
Fresh milk	1	2	V	1	2	V		V
Fresh potatoes	1	2	V	1	2	V		V
Fresh apples	1	2	V	1	2	V		V
Whole turkey	1	2	V	1	2	V		V

IF RESPONDENT DOES NOT KNOW OF ANY PRODUCTS WHICH ARE GRADED (Q. 10), SKIP TO Q. 16.

IF RESPONDENT DOES NOT BUY ANY GRADED PRODUCTS (Q. 11), SKIP TO Q. 13.

13. Some of the graded products have several levels of grades . . . to your knowledge, what are the different grades for (EACH PRODUCT BOUGHT Q. 1 AND "YES" IN Q. 10) from highest to lowest? (RECORD BELOW IN COL. 1)

IF NO CORRECT GRADES IN Q. 13, SKIP TO Q. 16

14. Now, I'd like to find out how you feel about Government grades. I'd like you to rate the helpfulness on a scale from 5 through 1, where 5 means the Government grade is very helpful and 1 means the Government grade is not at all helpful. Naturally, you may rate it anywhere between 5 and 1, depending on how helpful you feel the Government grade is. Please pick the number that comes closest to how you feel. How helpful are Government grades when you buy (EACH PRODUCT GRADED IN Q. 11)? (START WITH CHECKED PRODUCT)

	Col. 1 Q. 13					Col. 2 Q. 14					
	Highest	Next	Next	Next	Next	Very Helpful				Not At All Helpful	Don't Know
Beefsteak						5	4	3	2	1	V
Bacon											
Eggs						5	4	3	2	1	V
Butter						5	4	3	2	1	V
White bread											
Margarine											
Fresh milk											
Fresh potatoes						5	4	3	2	1	V
Fresh apples						5	4	3	2	1	V
Whole turkey						√ 5	4	3	2	1	V

15. How did you learn about Government grades for food?

(DO NOT READ LIST)

From Shopping	1
From Dining Out	2
From Reading Newspapers	3
From Reading Magazines and Pamphlets	4
From Talking With Friends	5
From School/College Courses	6
Other (SPECIFY)	7

16. Which of the following three ways of showing Government grades, if any, would be easiest for you to understand? (READ LIST)

(START WITH CATEGORY CHECKED ✓)

Letters, such as A, B, C	1
Words, such as Prime, Choice, Fancy ✓	2
Numbers, such as 1, 2, 3	3
DO NOT READ — No Opinion	4

17. The Department of Agriculture has certain marks to show a product is graded . . . To your knowledge, is the grade mark a (READ LIST)

(START WITH CATEGORY CHECKED ✓)

Circle?	1
Triangle? ✓	2
Shield?	3
Square?	4
Other (SPECIFY)	5
None	0
Don't Know	V

ASK Q. 18 OF EVERYONE WHO BUYS BEEFSTEAK, BACON AND/OR TURKEY - Q. 1 AND Q. 4 - IF NO BEEFSTEAK, BACON AND/OR TURKEY PURCHASED, SKIP TO Q. 22

18. Now, let's talk about meat and poultry. As you may know, some meat and poultry products are Government inspected - can you tell me what this inspection is for?

19. Thinking of stores where you shop and of the products you may have delivered at home, is (BEEFSTEAK/BACON/TURKEY) Government inspected? (RECORD IN COL. 1)

IF "NO" OR "DON'T KNOW" TO ANY PRODUCT, ASK:

20. To your knowledge is (BEEFSTEAK/BACON/TURKEY) Government inspected? (RECORD IN COL. 2)

	Col. 1 Q. 19			Col. 2 Q. 20		
	Yes	No	Don't Know	Yes	No	Don't know
Beefsteak	1	2	V	1	2	V
Bacon	1	2	V	1	2	V
Whole turkey	1	2	V	1	2	V

IF RESPONDENT DOES NOT KNOW OF ANY PRODUCTS INSPECTED (Q. 20), SKIP TO Q. 22

21. The Department of Agriculture has certain marks to show a product is inspected. To your knowledge is the inspection mark a . . .

(START WITH CATEGORY ✓ CHECKED ✓)	Circle?	1
	Triangle?	2
	Shield?	3
	Square?	4
	Other (SPECIFY)	5
	None	0
	Don't Know	V

ASK EVERYONE

Now, we're interested in a few things about you and your household, so we can see whether there are any differences of opinions in different kinds of households.

22. First, how many people are there living in your household?

1 - 2	1
3 - 4	2
5 or More (SPECIFY)	

23. What was the last grade of school you completed?

Grammar School	1
High School	2
College	3

24. In which of the following groups are you? (READ)

Under 25	1
25 - 34	2
35 - 44	3
45 - 54	4
55 and over	5

25. To get a good cross-section, we must interview people in all income groups. Please tell me if your total income, for your entire household, before taxes, is over or under $7,000?

Over $7,000?	1	Over $10,000?	3
		Under $10,000?	4
Under $7,000?	2	Over $4,000?	5
		Under $,000?	6

26. In what county in (STATE) are you now living?

_____

27. Do you live in a city of 2,500 or more population?

Yes	1
No	2

Sex of Respondent

Male	1
Female	2

THANK YOU!

Name of Respondent

_____

Interviewer

_____

SLIP SHEET

Product	Bought	Yes	Yes
Beefsteak	1	1	1
Bacon	2	2	2
Eggs	3	3	3
Butter	4	4	4
White bread	5	5	5
Margarine	6	6	6
Fresh milk	7	7	7
Fresh potatoes	8	8	8
Fresh apples	9	9	9
Whole turkey	0	0	0

GRADE SYSTEMS --

Words--prime, choice, fancy, etc.

Number -- 1, 2, 3, etc.

Letters -- A, B, C, etc.

* U. S. GOVERNMENT PRINTING OFFICE: 1970—394-381/ERS-78

UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C. 20250

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