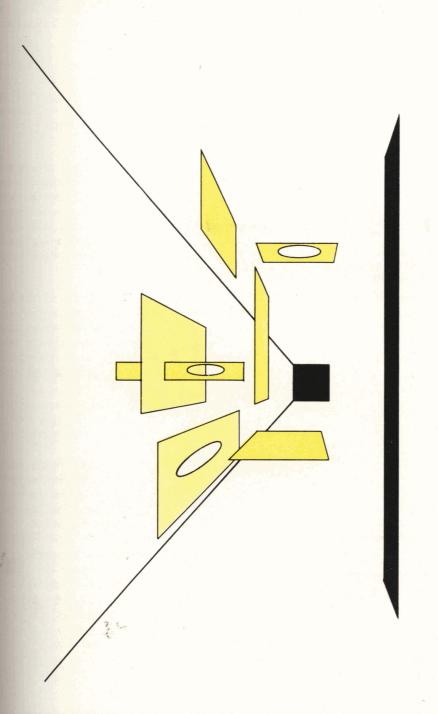
Consumers' Image of





#### FOUR-POINT PROGRAM

Developing New or Improved Products

Consumer Education

Advertising Program

Point-of-sale Promotions



## Summary

The Research Objective: The consumer's ideas about a food product are made up of several sub-images or attitudes toward the characteristics which they feel the product possesses. This research was designed to determine consumers' favorable and unfavorable images as to broilers, both in making purchases in stores and in serving them as a meat dish. These images, summarized briefly here, influence the consumer demand for broilers more than producers and processors often realize.

Marketing Appearance Image: The 434 housewives interviewed in Houston, Texas, indicated that the appearance of broilers is extremely important when selecting meat. Skin color is a key factor and most housewives preferred a broiler with a moderate to medium yellow-skin. This color conveys an image of a healthy, well-fed, juicy and flavorful broiler; whereas, white skin projected the image of a less healthy, flavorless bird.

Housewives believe chicken to be a wholesome product, but half of them did not know what a grade label meant and few recalled seeing one on broilers. Confidence in the quality of cut-up broilers might be enhanced by prominent use of grade designations.

Package and Convenience Image: There was a poor image associated with prepackaged, cut-up chicken. Objections were to the added cost, but perhaps more importantly the poor image related to skepticism regarding the broiler's freshness, dissatisfaction with the number and shape of pieces, as well as complaints that the bones are usually splintered.

Housewives, in the interviews, emphasized ease of preparation as a factor in selecting meats. Therefore, a pack of cut-up chicken which can be bought with confidence would help considerably to improve consumers' opinions of broilers.

Weight versus Cost: Consumers selected broilers on the basis of the weight of the bird and not by total cost. The price range tested was from 29 to 43 cents per pound.

Broilers weighting 2 to 3 pounds were preferred; those weighing 4 pounds or more conveyed an image of an older and also, tougher, chicken.

The Economy Image: The consumer image of broilers as an economy meat is excellent. It is not considered a "cheap" makeshift meat to stretch the food budget.

The Nutrition Image: Although three out of four housewives interviewed had no formal nutrition or home economics training, they had their own nutrition image of various meats?

They believed chicken to be lower in protein than beef, that it has less B vitamins and is higher in calories than beef. On the contrary, food technologists' analyses indicate that chicken is superior to most popular beef cuts in protein and B vitamins and is lower in calorie count.

The Preparation and Cooking Image: The house wife's image of broilers focuses on one method-frying. The major deterrent to preparing other dishes was that these are either too difficult or cannot be prepared satisfactorily. This necessarily limits the use image of chicken.

The Weight Reducing Image: Most consumers do not have a favorable weight reducing image for broilers. Chicken was thought to be higher in caloris and lower in protein than beef, whereas, as compared with most beef cuts, the reverse is true. Although the beef industry has successfully created a high-protein low calorie image for its product, the broiler industry has not.

The Purpose Image: The concensus of the house wives interviewed was that broilers are a good, typical family meal for the medium and low socio-economic groups. For higher socio-economic groups, beef is more appropriate. However, most thought that broilers for Sunday in higher socio-economic groups was not ruled out entirely.

Broilers were not considered to be as acceptable as beef for formal entertaining. Broilers were preferred for less formal and more frequent entertaining situations.

For entertaining women friends, chicken was preferred by one respondent in four, fish by one in three and beef by one in six. Evidently fish, particularly tuna fish, has a close competitive image to chicken for light luncheon salads and sandwiches.

Conclusions: These research findings indicate that the broiler industry should improve the products image among consumers. There is a need for product improvement, development of new and ready-cooked product forms, development of prestige recipes using chicken, and education and promotional information as to the product's desirable nutritional qualities. Suggestions for accomplishing these objectives and more detailed results of the research are presented in the following pages.

Summary	2
Research Plan	3
Consumer Preferences and Motivations in Selecting Broilers and Other Meats	4
Meats Preferred for Selected Purposes, Occasions and Social Situations	4
Consumers' Knowledge of the Nutritional Value of Chicken Compared to Other Meats	16
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# Consumers' Image of broilers

Henry V. Courtenay and Robert E. Branson\*

Boosting of chicken consumption from 14 pounds to 30 pounds per person within the past two decades has been a major achievement of the poultry industry. This expansion has been the direct result of the new technology of broiler production plus mass merchandising of the product by food supermarkets. As a result, consumers have been provided with a large, continuous supply of high-quality broilers at successively lower retail prices.

Acutely evident is the fact that productive capacity for broilers far exceeds the expanded consumption rate. Underlining this situation has been the 10 to 13 cents price per pound to producers for broilers during 1961 and retail supermarket prices of about 23 cents to consumers.

To an industry in such a position, the important and basic question inevitably arises as to whether any possibility exists for further market development and expansion. To Texas producers in particular—who are a major factor in the nation's broiler industry—this became a high priority problem.

### Research Plan

Foreseeing the impending and growing market difficulties for broilers, the Department of Agricultural Economics and Sociology undertook a longrange, extensive and continuing program of consumer market research regarding poultry products. In previously reported research, the objective was to delineate the size, scope and general nature of the

current consumer market for broilers.<sup>1,2</sup> Emphasis, therefore, was primarily on (1) the existing level of consumer preference for chicken as compared with

<sup>&</sup>lt;sup>1</sup>Branson, Robert E., George Mountney, "Consumer Attitudes and Preferences Regarding Chicken," Texas Agricultural Experiment Station Bulletin 895, March 1958.

<sup>&</sup>lt;sup>2</sup>Mountney, George, Robert E. Branson, H. V. Courtenay, "Preferences of Chain Food Store Shoppers in Buying Chicken," Texas Agricultural Experiment Station Miscellaneous Publication 348, April 1959.

<sup>\*</sup>Respectively, formerly assistant professor and professor, Department of Agricultural Economics and Sociology.

other meats, (2) the number of times chicken dishes were served, (3) the forms in which chicken was served and (4) what particular criteria shoppers used in their selection of chicken when making purchases.

The objective of the research reported in this publication was to go further and explore some of the important aspects of consumers' motivations for buying and using chicken. Only with an adequate knowledge of these "whys" and "why nots" for using chicken can a meaningful, realistic and constructive market expansion plan for the broiler industry be formulated and effected.

This research was conducted in Houston, Texas, in the summer and fall of 1958 among 480 households representing a probability sample cross-section of all Houston families. A comparison of the characteristics

of the Houston population and that of the sample households is shown in the Appendix. All house wives, or food shoppers, were interviewed in their homes by professional market research interviewers

Several of the questions used in the interview were presented in direct verbal and in indirect picture frustration projective forms. Separate interview questionnaires were used for the two types in interviewing and these were randomly alternated among the house wives. Market research psychologists, as well as those in other lines of specialization, have determined that where emotional factors are involved, direct verbal questions tend to evoke rational socially acceptable answers. On the other hand, projective questioning techniques reveal the subconscious and emotional factors which often are more likely to accurately predict consumer behavior.

## Consumer Preferences and Motivations in Selecting Broilers and Other Meats

The preferences which consumers have among meats are only partially reflected in the amounts purchased or in the frequency with which they are served in the home.

The consumer oriented factors prompting preferences for a meat evolve largely from personally held attitudes toward its nutritive values, flavor characteristics, probable cooking success, family member acceptance and tenderness of the meat plus equally important class-cultural associations, concerning its relative status and prestige position in the food hierarchy.

Price in relation to other meats, availability at the food store, packaging and display are external, sometimes called exogenous, factors which influence the final purchases within the general preference framework of the consumer.

These external factors of display, packaging et al., are easily observed and may be changed. However, inherent consumer attitudes are less obvious, must be carefully researched and are not so easily altered.

The following series of charts and diagrams present a convenient visual presentation of the preference and status position of chicken versus other meas among Houston families. Research experience suggests that the image found among Houston families usually prevails among most other Texas city families.

## Meats Preferred for Selected Purposes, Occasions and Social Situations

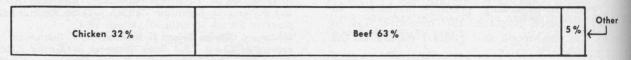
Research indicated that the preference position of meats varies considerably with the particular purposes and the occasion or social situations for which the meats are required. For example, there is one choice for a formal prestige situation, another for entertaining a friendly couple of approximately the same social status as the hostess; another when a housewife thinks of meats in terms of class-cultural associations; and others when a housewife entertains

a group of women friends, wishes to control her weight or practice economy.

The following series of charts show the questions housewives were asked, the findings of the research and the marketing implications of these findings for the broiler industry. The first of the series of chars presents research findings concerning meats which Houston housewives considered best for a typical family meal.

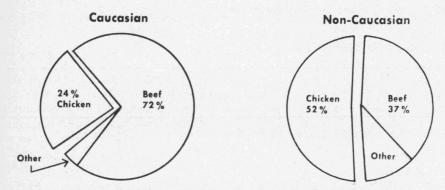
THE QUESTION: "Which meat makes the best typical family meal?"

PREFERENCES BY ALL HOUSEWIVES



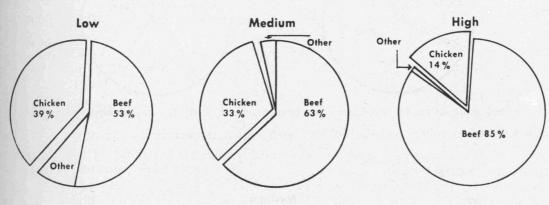
One-third of all housewives interviewed favored chicken.

#### PREFERENCES BY RACE

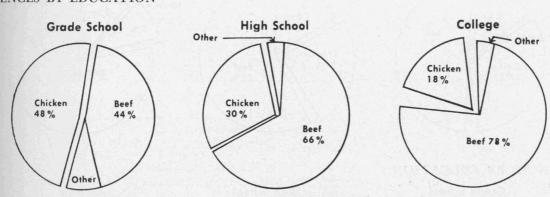


Most non-Caucasian housewives favored chicken, whereas, only one Caucasian housewife in four preferred it.

#### PREFERENCES BY INCOME<sup>3</sup>



#### PREFERENCES BY EDUCATION



As the socio-economic and educational levels of housewives increased, their preferences for chicken decreased.

#### MARKETING IMPLICATIONS

Since families in the higher educational and higher socio-economic groups often influence cultural trends in food, the poultry industry could improve the preference pattern for chicken by promoting prestige chicken dishes symbolic of status and associated with these higher socio-economic groups.

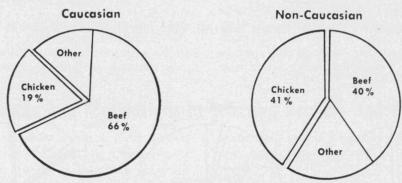
THE QUESTION: "An important business friend of my husband is coming to our home for dinner the evening. What should I select for the main dish?"

#### PREFERENCES BY ALL HOUSEWIVES

Chicken 25 %	Beef 64 %	-1	Other
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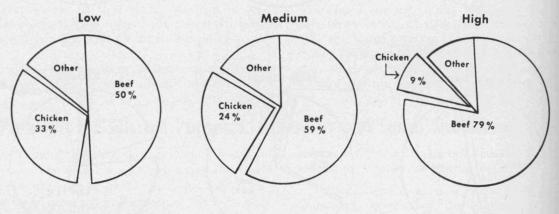
Beef, particularly steak, was selected almost three times as frequently as chicken.

#### PREFERENCES BY RACE

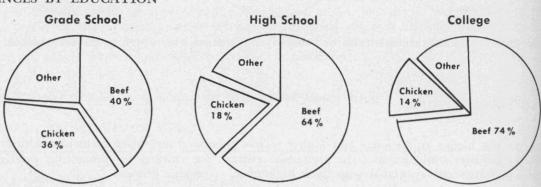


Chicken was selected more often by non-Caucasian housewives than by Caucasian housewives. Non-Caucasian housewives chose chicken and beef with similar frequencies.

#### PREFERENCES BY INCOME



#### PREFERENCES BY EDUCATION



As the socio-economic and educational levels of housewives increased, their preferences for chicken decreased and for beef increased.

Only one high-income housewife in ten selected chicken.

Housewives under 30 years of age did not favor chicken as much as those in the older age groups.

#### MARKETING IMPLICATIONS

It is important to note that chicken was relatively unpopular among the higher socio-economic housewives for formal entertaining. This is a further indication that stepped-up promotion of chicken as a prestige dish seems necessary. Furthermore, if younger housewives retain their present attitudes toward chicken through middle and old age, such a trend could substantially affect the interests of the poultry industry a decade from now even more than today.

THE QUESTION: "An important business friend of my husband is coming to our home for dinner this evening. What should I select for the main dish? Because. . . ."

## Easy to prepare \_\_\_\_\_\_\_ 32%

REASONS FOR PREFERENCES OF DISH BY ALL HOUSEWIVES

Men or everyone prefer it \_\_\_\_\_\_ 23%

Success in cooking and prestige impression

\_\_\_\_\_ 14%

Flavor

\_ 11%

Economy

Other

10%

Ease of preparation and people liking the dish or being impressed by it were the major reasons given by housewives for selecting a particular meat dish.

#### REASONS BY INCOME

Easy to prepare	Low 28% Medium 31%	_ High 43%
Men or everyone liking it	Low 23% Medium 25% High 21%	
Flavor	Low 14% Medium 8% High 10%	
Success in cooking and prestige impression	Low 10% Medium 15% High 18%	
Economy	Low 13% Medium 10% High 3%	
Other 2	Low 12% Medium 11% High 5%	

As the socio-economic level of housewives increased, the importance of easy preparation, pleasing the man, the cooking success and the prestige impression the dish gave increased.

Housewives under 30 years of age were less concerned with economy and more concerned with ease of preparation than those in older age groups.

Ease of preparation is a key consideration when a housewife is selecting meats. This factor has been discusse elsewhere in the report. Pleasing people, success in cooking, giving an impression and desirable flavor at also important. Pleasing the man in this situation was given special emphasis. This may have implied the beef steaks are more substantial than chicken for men.

-1

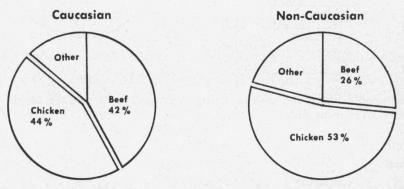
THE QUESTION: "I met a new couple whom I like very much and I've invited her and her husband out for supper tonight. I wonder what meat would be best to serve?"

#### PREFERENCES BY ALL HOUSEWIVES

Chicken 47 %	Beef 37 %	Other 16%

Chicken, particularly fried chicken, was preferred by more housewives than other meats.

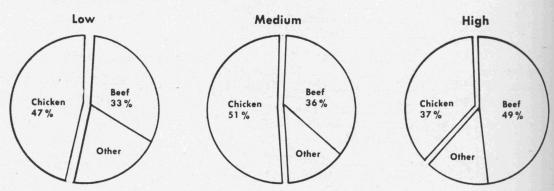
#### PREFERENCES BY RACE



A slightly greater percentage of non-Caucasian than Caucasian housewives selected chicken.

When non-Caucasian housewives did not select chicken, they tended to select pork, whereas Caucasians selected beef.

#### PREFERENCES BY INCOME



More housewives in the low and medium socio-economic groups selected chicken than selected any other meat.

The high socio-economic group showed a preference for beef; nevertheless, a considerable proportion of them preferred chicken.

Chicken was quite popular among all age groups.

It appears that when the entertaining occasion moved away from the formal toward the less formal and more frequent entertaining situation, housewives preferred chicken over beef and other meats. The accent was on fried chicken.

THE QUESTION: "I met a new couple whom I like very much and I've invited her and her husband over for supper tonight. I wonder what meat would be best to serve? Because. . . ."

#### REASONS FOR PREFERENCES OF DISH BY ALL HOUSEWIVES

Easy to prepare	March to a receipting will be even	36%
Men or everyone prefer it	15%	
Economy	15%	
Flavor	11%	
Success in cooking and prestige impression	6%	
Informal	5%	
Other	12%	

Ease of preparation, economy and the fact that people had a general liking for the dish were main factors of preference.

Non-Caucasian housewives attached more importance to the prestige and impression connected with the dish than did Caucasians.

Housewives under 30 years of age placed more emphasis on men's preferences and everyone liking the dish than women in the older age groups.

#### BEASONS BY INCOME

REASONS BY INCOME		
Easy to prepare	Low 279	% Medium 41% High 46%
Men or everyone prefer it	Low 18% Medium 18% High 19%	
Economy	Low 19% Medium 10% High 16%	
Flavor	Low 17% Medium 8% High 6%	
Success in cooking and prestige impression	Low 9% Medium 10% High 4%	en e
Informal	. Low 0% Medium 5% High 5%	
Other	Low 10% Medium 8% High 4%	

As the family income increased, the importance of easy preparation also increased and the importance of flaw and the prestige impression of the dish decreased.

Economy and the idea of pleasing people did not vary significantly with income levels.

#### MARKETING IMPLICATIONS

Ease of preparation is of greatest importance for this occasion just as it was in the other situations. All how wives seemed to put less emphasis on pleasing the guests or creating a prestige impression in this inform situation than they did when entertaining formally. Economy was also more important when entertaining a couple than in formal entertaining. This setting could trigger ideas for broiler promotion.

THE QUESTION: "I would like to have some of the girls over for luncheon this week. What should serve for the main dish?"

#### PREFERENCES BY ALL HOUSEWIVES

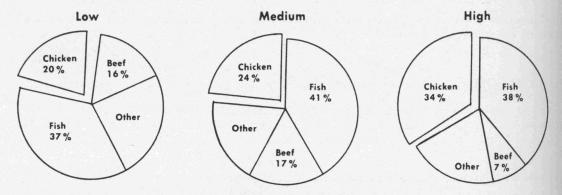
Chicken 24 %	Fish 39 %	Beef 15%	Pork 14%	Other 8 %
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Chicken, either for salad or sandwiches, was the preference of one housewife in four.

Fish, particularly tuna, was the choice of nearly twice this number of housewives.

The preference patterns for both Caucasian and non-Caucasian housewives were similar.

#### PREFERENCES BY INCOME



As the socio-economic level of the housewife increased, her preference for chicken increased.

More housewives in all socio-economic groups favored fish, particularly tuna, than favored chicken.

More housewives under 30 preferred chicken and beef.

The preference pattern for meats among housewives with grade school, high school and college educations were similar to those of the low, medium and high income groups.

#### MARKETING IMPLICATIONS

Women engage in considerable entertaining among themselves; therefore, women's luncheons represent a substantial market for meat products worthy of special attention.

Furthermore, meat preferences for women's luncheons tend to be of the salad type, which women this are acceptable to the calorie-conscious segment of society. Fish, either in salads or sandwiches, was general preferred over chicken. Fish, especially tuna, although it is very high in calories, is a close competitor chicken for the above purpose. The poultry industry should consider the promotion of ready-cooked chicken products that can be used with the equal ease of tuna fish in the preparation and serving of salads.

THE QUESTION: "I would like to have some of the girls over for luncheon this week. What should I serve for the main dish? Because. . . ."

39%

#### REASONS FOR PREFERENCES OF DISH BY ALL HOUSEWIVES

Easy to prepare

Light – women like it	30%	
Economy	16%	
Attractive	5%	
Other	10%	
Housewives of all races empha	sized ease of preparation, lightness, suitability for we	omen and economy.
Prestige or attractiveness of the	e dish was relatively unimportant.	
REASONS BY INCOME		
		Low 41%
Easy to prepare	Hig	_ Medium 43% ch 37%
Light – women like it	Low 28% Medium 27%	High 45%
Economy	Low 21% Medium 16% High 3%	
Attractive	Low 2% Medium 5% High 13%	
Other	Low 8% Medium 9% High 2%	

Ease of preparation was emphasized by housewives in all income groups.

Lightness of the dish for women was another important factor, particularly among wives in the higher socio-economic group.

As the family income level increased, the importance of economy decreased and attractiveness and prestige increased.

Housewives over 30 were more concerned with the lightness of the meal than those under 30.

#### MARKETING IMPLICATIONS

Ease of preparation continues to be the most important reason for preferring a food dish for this type of occasion. However, this appropriateness of the dish for women and its economy are also important reasons for preferences. A ready-cooked product similar to canned tuna fish or canned salmon is a favorite among women of all socio-economic groups when entertaining their women friends. Therefore, the poultry industry should give thought to developing more forms of ready-cooked chicken with convenience features similar to those of canned fish, because chicken is appropriate, is low in calories and high in protein. The upper-class housewives, who are the pace-setters, had a higher preference for chicken when entertaining women friends.

THE QUESTION: "I'm trying to control my weight or even slim down a bit. Should I or should I not eat meat? If I do, should I eat pork, chicken, beef, lamb or fish?"

#### PREFERENCES BY ALL HOUSEWIVES

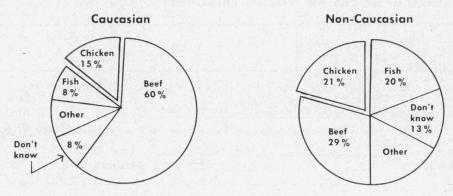
Chicken 17 %	Beef 51 %	Fish 12 %	Other 11 %	Don't know 9 %
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Beef was specified over chicken by three times as many housewives.

Chicken and fish were preferred with similar frequencies.

Nearly one housewife in ten did not know which meat was most suitable for weight control.

#### PREFERENCES BY RACE

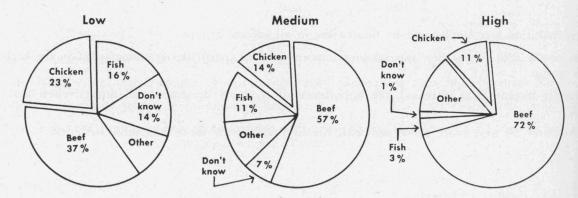


Caucasian housewives had strong preferences for beef.

Only one in seven preferred chicken.

Non-Caucasian housewives tended to prefer chicken, beef, fish and other dishes with more similar frequencia than did Caucasian housewives.

#### PREFERENCES BY INCOME



As the socio-economic level of housewives increased, their preferences for chicken and fish decreased, whereas their preferences for beef increased substantially.

As the socio-economic level of housewives increased, the frequency of "don't know" responses decreased.

More housewives under 30 years of age than those in older age groups preferred beef over chicken.

Reasons given for preferring a meat for slimming and weight control were almost unanimous – low in caloris and high in protein.

The low preference for chicken compared to that for beef when housewives select a meat for weight control is important. The younger, high-income, better educated housewife indicated a particularly weak preference for chicken compared with beef. This group exerts considerable influence on the behavior of the other groups and on future trends of behavior for all groups.

These findings indicate the urgent need for a consumer education and promotion program emphasizing the low calorie and high protein qualities of chicken.

THE QUESTION: A projective to his wife-question depicting a trucker talking to his wife-"I'll be home at six tonight-what are we having for supper?" (A week night dinner situation.)

#### SUGGESTIONS BY ALL HOUSEWIVES

	Chicken	Beef 32 %	Stew, meat loaf, etc. 34 %	Pork 13 %	Other 10%
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Chicken was suggested by one housewife in ten compared to one in three suggesting beef.

Stew, meat loaf and specialty items such as liver, heart and kidneys were also suggested by one in three.

Caucasian and non-Caucasian housewives demonstrated similar answer patterns.

As the socio-economic levels of housewives increased, their associations of the stew or specialty items with a trucker's weeknight dinner strengthened.

THE QUESTION: Trucker—"I'll be home at six tonight—what are we having for supper?" (A Sunday dinner situation.)

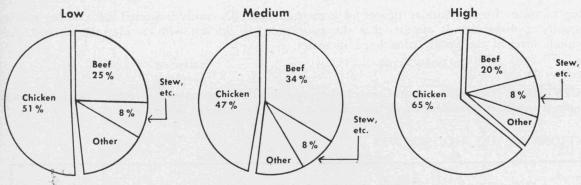
#### SUGGESTIONS BY ALL HOUSEWIVES

Chicken 52 %	Beef 27%	Stew, meat loaf 8 %	Other 13%
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Most housewives of all races suggested chicken.

About one in four suggested regular beef cuts.

#### SUGGESTIONS BY INCOME



Suggestions by housewives in all socio-economic groups emphasized chicken.

As the income level increased, suggestions of chicken increased and those of beef tended to decrease.

Housewives in all age groups associated chicken with the Sunday dinner of a truck driver's family.

As the occupational level of the housewife's husband increased, her association of chicken with the Sunday dinner of a truck driver's family strengthened.

Evidently most housewives consider chicken an economy meat that lower income people can afford. In addition, assuming Sunday dinner as the occasion for the family's best meal, it appears that chicken projected a favorable image of being appropriate as well as economical.

THE QUESTION: This class-cultural association question was structured around the opinions housewives held regarding the meat dish a mechanic's wife is likely to serve for Sunday dinner.

#### SUGGESTIONS BY ALL HOUSEWIVES

Chicken 39 %	Beef 43 %	Stew, meat loaf 8 %	Other 10%
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Housewives associated both chicken and beef with the Sunday dinner of a mechanic's family with similar frequencies—about two housewives out of five in each instance.

More non-Caucasian than Caucasian housewives suggested chicken for this situation.

As the socio-economic level of the housewives increased, their associations of chicken with the situation decreased.

Chicken was suggested by more housewives under 30 than by those in older age groups.

THE QUESTION: This class-cultural association question was structured around the opinions housewives held regarding the meat dish a mechanic's wife is likely to serve for week night dinner.

#### SUGGESTIONS BY ALL HOUSEWIVES

Chicken 15%	Beef 28 %	Stew, meat loaf 34 %	Other 23 %
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Chicken was suggested by one housewife in seven compared to one in four suggesting beef.

Stew, meat loaf and specialty items such as liver were suggested by one in three.

As the socio-economic levels of housewives increased, the percentage suggesting chicken also increased.

#### MARKETING IMPLICATIONS

Suggestions of meats for the Sunday dinner of a mechanic and his family indicated that chicken and beef were almost equally appropriate. It appears that the association of chicken with Sunday dinner weakens as the socio-economic level of the family considered increases.

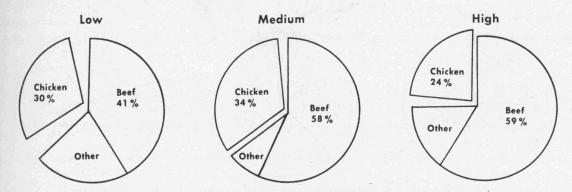
THE QUESTION: This class-cultural association question was structured around the meats housewives thought a company president's wife was likely to serve for Sunday dinner.

#### SUGGESTIONS BY ALL HOUSEWIVES

Chicken 25 %	Beef 49 %	Lamb	Other 18
그 마이네즘 얼마나 얼마에 가를 먹고 있는데 요요하면 뭐 먹는데 살아 가셨다.		8 %	Omer 10

Chicken was suggested by one housewife in four, compared to beef being suggested by half of all housewives. Non-Caucasian housewives suggested chicken about as frequently as Caucasian housewives but they suggested beef less frequently.

#### SUGGESTIONS BY INCOME



As the socio-economic level of the housewives increased, their suggestions of chicken decreased and those of beef increased.

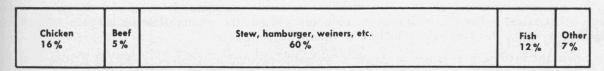
Fewer housewives under 30 than those in older age groups suggested chicken.

#### MARKETING IMPLICATIONS

The meats suggested by housewives as likely to be served by the family of a company president at Sunday dinner or on week nights were similar except that fewer suggested chicken for the week night situation. Significantly more housewives in the lower and medium socio-economic groups than in the higher socio-economic groups suggested chicken for the situations in question. It appears that chicken has greater prestige among the lower and middle classes than it has among higher class groups.

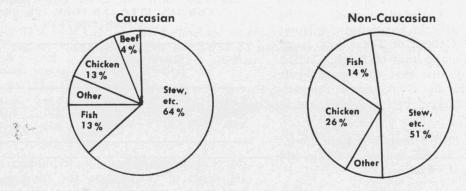
THE QUESTION: Suppose your food money had run a little short and you wanted to prepare an inexpensive meat dish for your family's evening meal, what would you select?

#### SUGGESTIONS BY ALL HOUSEWIVES

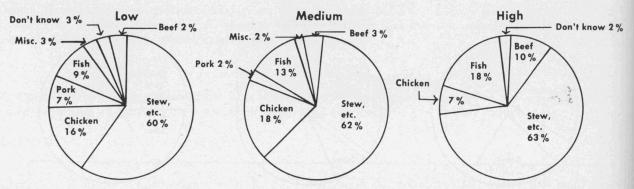


One housewife in six suggested chicken, compared to three in five suggesting a stew-hamburger-wiener type of dish.

#### SUGGESTIONS BY RACE



Twice as many non-Caucasian housewives as Caucasian housewives suggested chicken. Caucasian housewives suggested chicken and fish with similar frequencies.



Chicken was suggested less frequently by the higher socio-economic groups than by the lower ones.

Suggestions of stew-hamburger-wiener type of dish were given by nearly two out of three housewives in every socio-economic group.

#### THE QUESTION: "Which meat is the most economical buy?"

#### RESPONSES BY ALL HOUSEWIVES

Chicken 77 %	Beef 11 %	Fish 7 %	Other 5 %
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Chicken was suggested by more than three out of four housewives, compared with beef being suggested by one in ten.

The pattern of suggestions was similar for all races and socio-economic levels of housewives.

#### MARKETING IMPLICATIONS

Chicken was not associated strongly with a low-budget "cheap" meal such as stew, hamburger, offals and wieners by any socio-economic group. However, it was almost unanimously acclaimed the most economical meat buy. Therefore, it has the advantage of economy without the stigma of being a cheap makeshift item, only resorted to when the housewife's budget is almost exhausted.

This is important because it is easier to create a favorable prestige image of a product if it is not categorized as a cheap, low-budget item.

## Consumers' Knowledge of the Nutritional Value of Chicken Compared to Other Meats

Chicken is a high-protein, low-calorie meat which is rich in B vitamins. Calculations made by the authors in cooperation with the Department of Home Economics, The A&M College of Texas, and based on the publication, "Composition of Foods," USDA Handbook No. 8, indicated that the approximate levels of protein, calories and B vitamins in the average common cuts of chicken, beef and pork are as follows:

Chicken is highest of the three in protein, lowest in calories, nearly twice as rich as beef in niacin and about equal to beef in B vitamins.

Housewives were questioned concerning their knowledge about the nutritional value of chicken. The questioning involved the use of direct and in-

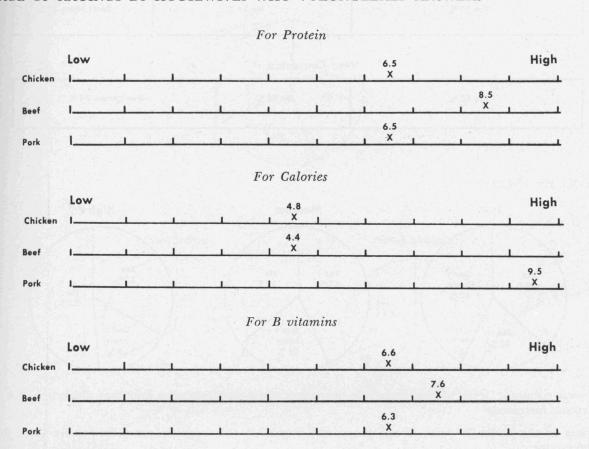
SELECTED FOOD VALUES OF THE AVERAGE CUTS OF CHICKEN, BEEF AND PORK PER 100 GRAMS RAW PORTION

Meat	Protein (grams)	Calories (units)	B <sub>1</sub> (grams)	B <sub>2</sub> (grams)	Niacin (grams)
Chicken	22	108	0.08	0.16	10.0
Beef	18	234	0.07	0.16	4.3
Pork	17	342	0.75	0.19	4.1

direct projective questioning techniques. The following series of charts show the combined results of housewives' responses to these questions. Such a combination presents a conservative assessment of the housewives' opinions.

THE QUESTION: "Check on the scale how much of these things are in beef, pork and chicken." (The order of the three meats were rotated among the respondents.)

#### AVERAGE OF RATINGS BY HOUSEWIVES WHO VOLUNTEERED ANSWERS4



#### MARKETING IMPLICATIONS

Housewives ranked chicken lower than beef for protein, higher than beef for calories and lower than beef for B vitamins. These rankings indicate that housewives erroneously consider chicken nutritionally inferior to beef. More housewives were unable to rank chicken for these three nutrients than was true for beef. The housewives were evidently better informed about beef than about chicken.

The poultry industry should consider this lack of knowledge regarding their product as a matter requiring urgent attention through consumer education and promotional campaigns.

THE QUESTION: "Which of the following statements, if any, do you think applies to fried chicken? —

a) Low calorie count per pound compared to other meats?" 5

#### OPINIONS BY ALL HOUSEWIVES

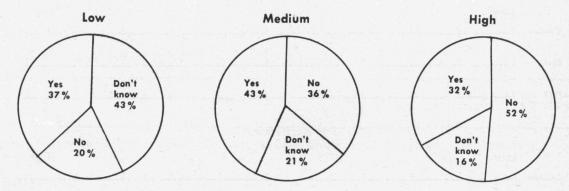
Yes 39 % No 32 %	Don't know 29 %
------------------	-----------------

One housewife in three could not rate chicken for protein; one in five could not rate it for calories; and seven out of ten could not rate it for B vitamins.

Statements b and c on pages 19 and 20, respectively.

# Caucasian Yes 39 % No 36 % Don't know 25 % Non-Caucasian Yes 39 % No 23 % Don't know 38 %

#### OPINIONS BY INCOME



As the socio-economic level of the housewife increased, the proportion who said that chicken is not low in calorie count increased.

Housewives in the under 30 years of age group also expressed this opinion more frequently than those in older age groups.

#### MARKETING IMPLICATIONS

About two out of three housewives said chicken was not lower in calories than other meats or that they did not know. Most upper class housewives said chicken was not lower in calories than other meats. These opinions confirm the unjustified ranking given chicken for calories in the following chart.

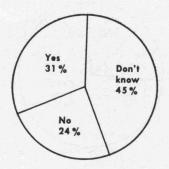
The poultry industry should endeavor to emphasize the low-calorie attribute of chicken.

Item	Calories (number)	Protein (grams)	Fat (grams)	Niacin (milli- grams)	Thiamin (micro- grams)
Chicken, fried	121	14.0	12.4	5.3	41
Beef					
Round Sirloin,	118	12.9	7.1	2.1	10
broiled	149	11.6	11.0	2.4	30
Club steak,					
broiled	171	11.5	13.3	2.3	30
Chuck roast	155	13.0	11.0	2.0	25

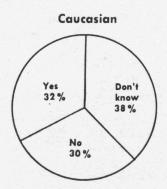
Source: "Food Values of Portions Commonly Used," by Bowes and Church.

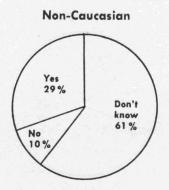
THE QUESTION: "Which of the following statements, if any, do you think applies to fried chicken? —
b) High usable protein compared to other meats?"

#### OPINIONS OF ALL HOUSEWIVES

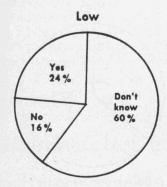


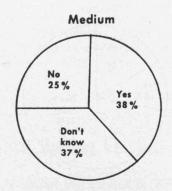
#### OPINIONS BY RACE

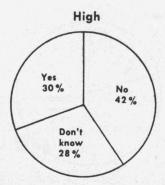




#### OPINIONS BY INCOME







As the socio-economic levels of housewives increased, their tendency to say fried chicken did not have higher usable protein also increased.

More housewives over 30 years of age than those under 30 said they did not know the answer to this question.

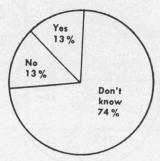
#### MARKETING IMPLICATIONS

Two out of three housewives were unable to properly answer the question as to the protein content of chicken. These findings confirm those shown in a previous chart, namely, most housewives do not have a favorable image of chicken with respect to protein content compared to beef.

The poultry industry should endeavor to project a high-protein image of chicken.

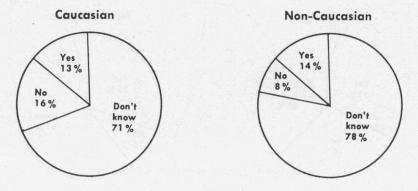
THE QUESTION: "Which of the following statements, if any, do you think applies to fried chicken? - c) Higher B vitamin content than other meats?"

#### RESPONSES BY ALL HOUSEWIVES

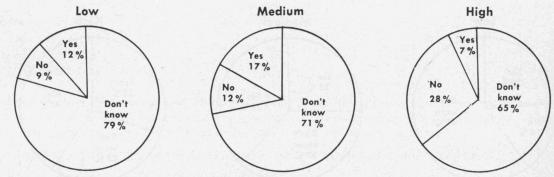


Three out of four housewives said they did not know.

#### RESPONSES BY RACE



#### RESPONSES BY INCOME



As the socio-economic and educational levels of housewives increased, the opinion that chicken is not higher in B vitatmins than other meats also increased.

#### MARKETING IMPLICATIONS

Most housewives in all socio-economic groups and all age groups do not know the relative value of chicken compared with other meats for B vitamin content. This is the third of the major attributes in chicken (protein, calories and B vitamins) about which the housewives appeared either uninformed or misinformed. The housewives' opinions concerning the general food value of chicken were only slightly better than those reported for these three attributes. However, two out of three housewives thought chicken was easier to digest than other meats. In view of these findings, the poultry industry may wish to re-evaluate the written materials on chicken packages, advertisements and other merchandising and promotional media being used with a view to stepped-up consumer education regarding the nutritional value of chicken.

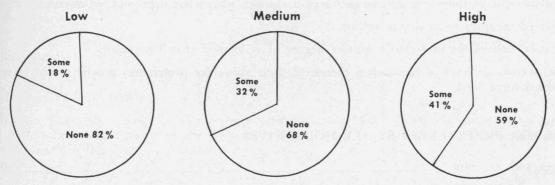
THE QUESTION: "Did you have any home economics training about foods?"

#### RESPONSES BY ALL HOUSEWIVES

Some 28 %	None 72 %
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Nearly three out of four housewives in the sample area had no formal training about foods either in school or through a non-school agency.

#### RESPONSES BY INCOME



As the socio-economic levels of housewives increased, the percentages having some formal training about foods increased.

The majority in all socio-economic and educational groups had no formal training about foods; this was particularly true for housewives 50 years of age and over.

#### MARKETING IMPLICATIONS

These findings amplify the need for consumer education about foods, particularly for homemakers who have finished their formal education. The few housewives who had some nonschool training seemed to prefer the cook-school approaches of organizations such as the light and gas companies. The poultry industry may benefit from sponsoring a program of adult education concerning foods and nutrition in view of poultry and eggs having high nutritional values. The poultry industry may have more to gain by such programs than producers of other food products since housewives are not well informed on the relative food values of poultry products compared to other meats and foods.

## What Housewives Look for When Buying Chicken--and Why

The following series of charts deal with several physical aspects of chicken which affect consumer demand. These include such characteristics as skin color, weight of bird, form of product, what housewives associate with these characteristics and why they buy or do not buy the product.

The skin color of a chicken is extremely important to shoppers.<sup>6</sup> As far as housewives are concerned, skin color carries connotations of the bird's health, fatness, flavor, tenderness and size. House-

wives were shown a series of four 8" x 10" color prints of broilers with pigmentations ranging from white through medium yellow to determine the approximate skin color they prefer. The four broilers were identical except for skin color variation. The sequences of presenting the pictures to the respondents were alternated to avoid order bias.

The first of the following charts shows what skin colors consumers want, why they want these colors and what various skin colors mean to them.

Branson, R. E., G. J. Mountney and H. V. Courtenay, "Preferences of Chain Food Store Shoppers in Buying Chicken," Texas Agricultural Experiment Station Miscellaneous Publication 348, April 1959.

THE QUESTION: "Suppose you were shopping for a chicken in your food store, which one of these, if any, would you buy?" (A series of 8" x 10" color photos of dressed broilers depicting variations from white to medium yellow were shown.)

#### PREFERENCES BY ALL HOUSEWIVES

				1
Medium yellow 36 %	Moderate yellow 18 %	Light yellow 16 %	White 27 %	No answer 3 %

More than two out of three housewives preferred a chicken with some degree of yellowness.

Most preferred medium to moderate yellow.

Non-Caucasian housewives preferred a greater degree of yellowness than Caucasians.

As the socio-economic level of housewives increased, their skin-color preferences moved toward a moderate to light yellow-skinned bird.

#### REASONS FOR PREFERENCES BY ALL HOUSEWIVES

Good appearance or color			50%
Right amount of fat		31%	
Cleaner looking	13%		
Other	6%		

Most reasons for selecting a particular bird from the four pictures were based on color or appearance.

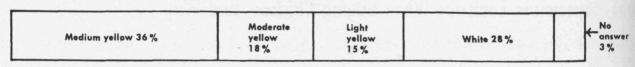
Distribution of reasons given by non-Caucasian housewives and Caucasian housewives were similar.

Housewives under 30 years of age placed more emphasis on "color and appearance" than did older housewives.

THE QUESTION: "Apart from anything else, which chicken has the color of skin you like?"

#### PREFERENCES BY ALL HOUSEWIVES

#### First Choice



#### Second Choice

Medium yellow 13 %	Moderate yellow 41 %	Light yellow 30 %	White 8 %	No answer
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Non-Caucasian housewives showed greater tendency to prefer medium or moderate yellow skin colors than Caucasians.

As the socio-economic and educational levels of housewives increased, their preference for a lighter yellow also increased.

#### REASONS FOR PREFERENCES BY ALL HOUSEWIVES

 Good appearance or color
 41%

 Right amount of fat
 13%

 Clean looking
 15%

 Flavorful and tender
 22%

 Other
 9%

Most housewives preferred a certain skin color just for good appearance or because to them it denoted the flavor, tenderness and amount of fatness desired in the chicken.

More non-Caucasian than Caucasian housewives associated skin pigmentation as an indicator of the amount of fat on the bird.

As the socio-economic and educational levels of housewives increased, the reasons based on color and appearance also increased.

#### MARKETING IMPLICATIONS

Most housewives preferred a medium to moderate yellow-skinned bird. Evidently, housewives associate the skin color with other characteristics of the bird as well as its general appearance. These associations will be discussed further in the charts that follow.

THE QUESTION: "What does a yellow skin mean to you in a chicken?"

#### OPINIONS BY ALL HOUSEWIVES

	Lacks flavor and juiciness				
Properly fed, healthy and plump 51 %	Has flavor and juiciness 17%	Older chicken 13%	Misc. 12%	5%	Poorly fed or unhealth 2 %

Two out of three housewives associated yellow skin color with favorable factors.

Non-Caucasian housewives associated yellow skin color with favorable factors to an even greater degree than Caucasian housewives.

Housewives in higher socio-economic and educational groups tended to associate extremely yellow skin with a fatter or older chicken more frequently than did housewives in other socio-economic and educational groups.

THE QUESTION: "What does a white skin mean to you in a chicken?"

#### OPINIONS BY ALL HOUSEWIVES

Has flavor and juiciness Lacks Young Properly Misc. juiciness and fed and Clean Poorly fed or 5% and flavor fresh healthy 11% 12% unhealthy 38 % 12% 12% 10%

Half of the housewives associated white skin color with improper feeding, poor health or lack of tastefulness.

More non-Caucasian than Caucasian housewives tended to associate white skin with lack of flavor and lack of juiciness.

As the socio-economic levels of the housewife increased, association of white skin with unfavorable characteristics became even stronger.

A moderate to medium yellow-skinned broiler carries more favorable connotations in the minds of house wives than does a white-skinned one. However, some shoppers still think in terms of yellow birds being old and white ones being young. A sufficient percentage of housewives associated white skin with cleanliness which points out the need for consumer education concerning the skin color of broilers.

THE QUESTION: "Do any of these chickens seem fatter than the others, or does there seem to be no difference?"

#### OPINIONS BY ALL HOUSEWIVES

One is fatter 46 %	No difference 45 %	Not sure 9 %
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As the socio-economic and educational levels of the housewives increased, the opinion that there was no "difference" in the fatness of the four birds shown also increased.

More non-Caucasian than Caucasian housewives thought one bird was fatter or plumper than the others.

THE QUESTION: "Since you think one seems fatter, which one is fatter?"

#### OPINIONS BY ALL HOUSEWIVES

and the state of t		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	ght	
Medium yellow 30 %	Mod- erate yellow 9 %	2%	White 7 %	No difference or not sure 52 %

Non-Caucasian housewives tended to associate medium yellow with the "fattest" bird more often than Caucasian housewives.

THE QUESTION: "Why do you think it is fatter?"

#### OPINIONS BY ALL HOUSEWIVES

Appears fat and	Color	
plump 30 %	16%	No response 54 %

Note: About half of the respondents thought one of the four birds was fatter. Evidently, yellow-skinned birds cause an optical illusion concerning plumpness, conformation and fleshing for some people.

#### MARKETING IMPLICATIONS

Although a yellow-skinned broiler is preferred over a white-skinned one, caution should be exercised with respect to the degree of yellowness, since housewives sometimes confuse extreme yellowness with an old, fat bird.

THE QUESTION: "If you were buying a chicken at the store and these labels described the cost, etc. of them, which bird would you choose from each group? And what would your second choice be?" 7

ALL HOUSEWIVES' FIRST AND SECOND CHOICE OF BROILERS ON THE BASIS OF THE PRICE, WEIGHT, TOTAL PRICE LABELS

	Weight	2 pounds	2 pounds, 10 ounces	3 pounds	3 pounds, 6 ounces	No answer
Cents			Percent	and total cost		Percent
per pound	Choice					
R. Ballette	1	27	28	23	19	3
29		\$.58	\$.76	\$.87	\$.98	
	2	9	37	37	14	3
	1	27	28	28	14	3
35		\$.70	\$.92	\$1.05	\$1.18	
	2	11	41	30	15	3
	1	28	37	27	11	2
43		\$.86	\$1.13	\$1.29	\$1.45	
	2	11	41	30	14	4

THE QUESTION: "What was your reason for choosing the ones you selected as your first preference?"

#### REASONS BY ALL HOUSEWIVES

	Economy and	
Size or weight 63 %	Economy and price 15 %	Misc. 22 %

Almost two out of three housewives said they selected the broiler described on the specimen labels because of its weight or size.

Only one in seven mentioned price or economy.

#### MARKETING IMPLICATIONS

Since the weight of chicken they would purchase did not diminish significantly as the price per pound and total price increased, it appears that within the price range indicated, housewives will continue to select broilers on the basis of their preference for a particular weight rather than that of total price. It should be noted that there was a slight tendency to reduce the weight of bird preferred when the price was 43 cents per pound. However, this was not statistically significant at the 95 percent level of confidence.

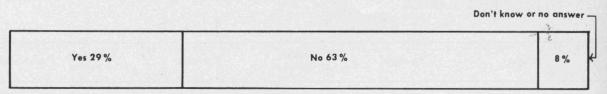
Further research regarding the matter of price and its effect on the weight of chicken purchased, particularly when the consumer is faced with other meat alternatives at various prices, is a study that may have profitable results for the poultry industry.

Nevertheless, the results of this limited experiment indicate that, assuming a housewife has made a firm decision to buy a chicken, she still will select on a weight basis if the price per pound is within the 29 cents to 43 cents range.

Three groups of four price and weight labels showing the weight, price per pound and total price were shown to each housewife. The order of presenting them was randomly rotated for each interview. This question was designed to determine whether housewives selected broilers primarily on the basis of weight, price per pound, total price or some combination of the three factors.

THE QUESTION: "If you were buying a chicken for frying, would you usually buy (a) one already cut-up, (b) a whole one and have the butcher cut it up, or (c) a whole one and cut it up yourself?"

#### RESPONSES BY ALL HOUSEWIVES TO (a) ONE ALREADY CUT UP



Fewer than one housewife in three preferred cut-up chicken.

More non-Caucasian than Caucasian housewives said they would not buy a cut-up chicken.

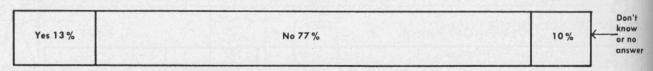
As the socio-economic and educational levels of housewives increased, there was some increase in the percent age preferring cut-up chicken, but even in the highest socio-economic groups, only about 40 percent preferred cut-up chicken.

#### REASONS BY ALL HOUSEWIVES FOR THEIR RESPONSES TO (a)

Don't like to cut it up myself 27 %	Cut-up chicken costs more 24 %	Don't like shape and number of pieces 14 %	Can't examine 11 %	Prefer whole chicken 13 %	No response 11%
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As the socio-economic and educational levels of housewives increased, the extra cost became less important and the factor of examination for freshness became more important.

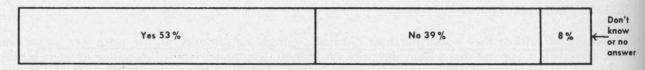
#### RESPONSES BY ALL HOUSEWIVES TO (b) A WHOLE ONE AND HAVE THE BUTCHER CUT IT UP



Even more housewives opposed the idea of selecting a whole chicken and having the butcher cut it up for them than opposed the idea of purchasing prepackaged cut-up chicken.

The reasons given were that the butcher splinters the bones and does not cut it into the shape and number of pieces housewives prefer, as well as the extra cost.

#### RESPONSES BY ALL HOUSEWIVES TO (c) A WHOLE ONE AND CUT IT UP YOURSELF



Most housewives preferred to purchase a whole broiler and cut it up themselves.

As the socio-economic and educational levels of housewives increased, their resistance toward cutting the broiler up themselves also increased.

#### MARKETING IMPLICATIONS

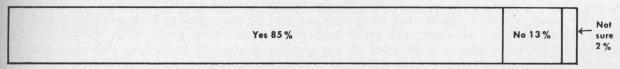
Housewives have a poor image of cut-up chicken, particularly with respect to the number of pieces, shape of pieces, splintered bones and doubts regarding the freshness of the product. A prevalent thought among house wives is that stale pieces of chicken are hidden on the bottom of cut-up chicken packs and also that left-over birds several days old are cut-up and pre-packaged as a means of "passing them off" on unsuspecting shoppers.

Ease of preparation was extremely important to housewives when selecting meats for most occasions. It therefore seems important to provide a satisfactory eviscerated pack of cut-up chicken which should add

to the convenience of its preparation, particularly since fried chicken is the favorite chicken dish. Whether the housewife's unfavorable image of cut-up chicken is based on fact or fancy is beside the point—the situation requires positive action on the part of the poultry industry. An attractive pack of cut-up chicken which housewives could buy with confidence may be a key factor in helping create a more favorable image of the cut-up product.

THE QUESTION: "Have you, by any chance, seen these labels?" (Respondents were shown facsimiles of poultry inspection tags and grade labels.)

#### RESPONSES BY ALL HOUSEWIVES TO INSPECTION LABELS



As the socio-economic and educational levels of the housewife increased, her ability to recall having seen an inspection tag also increased.

Recall was poorer among housewives under 30 years of age and those over 50 years than among other age groups.

#### OPINIONS BY ALL HOUSEWIVES REGARDING THE MEANING OF AN INSPECTION LABEL

		T co	onfused it with grade
Inspected for disease 57 %	Inspected by government or other agency 21 %	5 %	Don't know 17%

As the socio-economic and educational levels of housewives increased, their knowledge of the meaning of an inspection label increased.

As the age of housewives increased, their knowledge of the meaning of inspection labels decreased.

#### RESPONSES BY ALL HOUSEWIVES REGARDING WHETHER THEY HAD SEEN A GRADE LABEL

No 37 %	sure 8 %
	No 37 %

As the socio-economic and educational levels of housewives increased, recall of seeing grade labels decreased. There was greater recall of seeing grade labels among housewives under 50 years of age than among those 50 years and over.

## RESPONSES BY ALL HOUSEWIVES REGARDING THE PRODUCT OR PRODUCTS ON WHICH THEY HAD SEEN GRADE LABELS

Don't know 47 %	Eggs 20 %	Beef 17%	Milk 8 %	Chicken 8 %
		the same time of the squares		

As the educational level of the housewives increased, their recall of having seen a grade label on food products increased.

More non-Caucasian than Caucasian housewives recalled having seen a grade label on poultry products.

#### OPINIONS BY ALL HOUSEWIVES REGARDING THE MEANING OF A GRADE LABEL

Don't know 46 %	Highest quality 41 %	Confused with inspection	or safe
		8 %	5%

As the educational level of the housewives increased, their knowledge of the meaning of grade labels increased. Younger housewives had greater knowledge of the meaning of grade labels than older housewives.

#### MARKETING IMPLICATIONS

Since most housewives recalled having seen inspection labels and generally had some knowledge of what these labels mean, it would appear that consumers can and do buy poultry with confidence regarding the product's wholesomeness. However, not many housewives recall seeing grade labels on poultry and most housewives do not know what a grade label on any product means. These findings indicate a need for consumer education regarding grade labels and what grade means.

THE QUESTION: "When you buy whole or cut-up chicken at the food store, are the kidneys: (1) still in the chicken; (2) have been removed; or (3) don't know."

#### RESPONSES BY ALL HOUSEWIVES

Still in 50 %	Removed 37 %	Don't know 13 %
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More housewives in lower socio-economic and educational groups said the kidneys were "still in" than those in other socio-economic and educational groups.

## RESPONSES BY ALL HOUSEWIVES REGARDING WHETHER THEY PREFERRED THE KIDNEYS REMOVED OR LEFT IN

Prefer them removed 50 %	No preference 36 %	Don't know 11 %	Left in 3 %
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More Caucasian than non-Caucasian housewives said they preferred the kidneys removed.

As the socio-economic and educational levels of housewives increased, their preference for having the kidneys removed increased.

## RESPONSES BY ALL HOUSEWIVES CONCERNING THE PAYMENT OF AN EXTRA FEW CENTS TO HAVE THE KIDNEYS REMOVED

Yes 18%	/ y~***	No 73 %	Don't know 9 %

As the socio-economic and educational levels of housewives increased, their willingness to pay a few cents to have the kidneys removed increased.

As the ages of the housewives increased, their resistance to paying a few extra cents for the removal of the kidneys increased.

Most housewives do not think the removal of the kidneys from broilers is a sufficiently important factor to warrant extra cost even if the cost is quite small.

## Methods of Preparing Chicken and Why Housewives Serve or Do Not Serve Selected Chicken Dishes

The following series of charts show the various ways housewives prepare chicken and the relative frequencies with which each chicken dish is served.

The charts also show the respondents' reasons for preparing or not preparing selected chicken dishes.

THE QUESTION: "How do you prepare chicken for your family and how frequently do you prepare each of the chicken dishes you have mentioned?"

INDEX SHOWING THE RELATIVE NUMBER OF TIMES PER HUNDRED THE TOTAL SAMPLE OF RESPONDENTS SERVED VARIOUS CHICKEN DISHES<sup>8</sup>

Fried		Index 50
Stewed	Index 12	
Bar-b-cued	Index 9	
Baked	Index 7	
Chicken 'n Dumplings	Index 5	
Miscellaneous	Index 17	

Frying was the most popular method of preparing chicken; nearly two out of three housewives said they served fried chicken at least once weekly; only one in ten never fry chicken.

The least popular chicken dish was chicken 'n dumplings; nearly 80 percent of the respondents said they rarely or never make chicken 'n dumplings.

As the socio-economic and educational levels of housewives increased, the frequency with which they barbecued and baked chicken increased and the frequency with which they fried and stewed chicken decreased.

THE QUESTION: "Why do you serve or not serve the following chicken dishes?"

REASONS BY ALL H	OUSEWIVES	
	Family likes it and flavor 60%	
	Economy 3%	
	Too fattening 5%	
Fried	Easy to prepare 21%	
	Unpleasant features 6%	
	Miscellaneous 5%	
	Family likes it and flavor 36%	
3 %	Economy 8%	
	Too fattening 4%	
Baked	Can't make—hard to prepare 28%	
	Easy to prepare 5%	
	Unpleasant features 11%	
	Miscellaneous 8%	

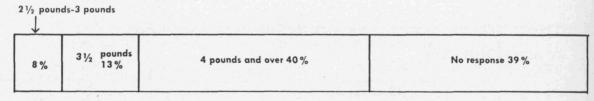
The index is based on the following assumptions as to frequency of servings as related to the indicated terms: frequently—twice a week; occasionally—once a month; seldom—twice a year; never, or no response—none during the year.

		Family likes it and flavor 35%
	Economy 5%	70
	Too fattening 3%	
Stewed	Can't make—hard to prepar	e 10%
	Easy to prepare 8%	
	U	Inpleasant features 31%
	Miscellaneous 8%	
	Family likes it and flavor 8%	
	Economy 14%	
	Too fattening 17%	
Chicken 'n Dumplings	8 70	Can't make—hard to prepare 39%
1 0	Easy to prepare 179	
	Miscellaneous 5%	
		Family likes it and flavor 35%
	Too fattening 4%	70
	C	San't make—hard to prepare 31%
Barbecued	Easy to prepare 10%	
	Unpleasant features 9%	
	Miscellaneous 11%	

The index chart on the frequency of serving various chicken dishes shows that frying is the popular method of preparing broilers. Most housewives said they prepared fried chicken because the family likes the flavor and also that it was relatively easy to prepare. Other chicken dishes such as baked and barbecued chicken were served less frequently because of difficulty in preparation. Frequent use of products depends, to a large extent, on the number of acceptable methods of preparation. Consumer education, promotional campaigns and recipes attached to broilers would help motivate housewives to learn how to prepare chicken in several ways. Such efforts by the broiler industry would help expand consumer demand for broilers by increasing the utility of the product and thus help to improve the competitive position of broilers with respect to both sales volume and price.

THE QUESTION: "At what weight, if any, does a chicken begin to get a little tough?"

#### RESPONSES BY ALL HOUSEWIVES



Non-Caucasian housewives tended to set the weight at which chicken gets a little tough somewhat higher than Caucasian housewives.

As the socio-economic and educational levels of housewives increased, the weight mentioned tended to converge on the 4-pound mark.

#### MARKETING IMPLICATIONS

Most housewives considered 4 pounds the critical weight limit at which chicken begins to get a little tough. This finding suggests that, when profitable, broilers could be grown to a weight approaching 4 pounds without significant consumer resistance. Conversely, these findings indicate that broilers heavier than 4 pounds might constitute a deterrent to broiler sales.

## Appendix

The survey was made among a random probability sample of 480 households in Houston, Texas, during the summer and fall of 1958.

The composition of the survey sample with respect to race and income levels of the respondents was similar to that of the total Houston population.

SELECTED CHARACTERISTICS OF HOUSTON FAMILIES COMPARED TO THOSE IN THE SURVEY SAMPLE, 1958

	Houston <sup>1</sup>	Sa	Sample	
THE STATE OF THE S	_ 1	Percent of families	_	
Race				
White (Caucasian) <sup>2</sup>	79		76	
Negro	21		24	
Other	3		3	
Family Incomes				
Less than \$4,000	38		40	
\$4,000 - \$7,999	46		44	
\$8,000 and over	16		16	

Race-Bureau of Vital Statistics, City of Houston Health Department and Houston Chamber of Commerce. Income-Sales Management Survey of Buying Power, 1959.

\*Includes Latin-Americans.

Less than 1 percent.

The housewife was interviewed except in instances of single persons, widows or widowers living as a single household.

Field interviewers were professional personnel experienced in interviewing procedures and methods. All attended a briefing and training session. They were also provided with a handbook of instructions and were required to take trial interviews before the survey began. Completed interviews were checked as to authenticity by a system of random selection provided to the field supervisor.

Two hundred and forty of the 480 schedules had direct and indirect written questions (without pictures). The other 240 had questions using both

written questions and picture projective questions. The two types of schedules were randomly alternated among the respondents interviewed. The results of the analyses to determine the response variation encountered when the two techniques were employed are available upon request from the Consumer Economics Section, Department of Agricultural Economics and Sociology, The Agricultural and Mechanical College, College Station, Texas.

The survey schedule involved 33 questions comprising approximately 170 parts. Respondents did not think the schedule which included pictures was shorter than the one which excluded pictures. However, at the same time, they did not consider the one with pictures longer than the other. One respondent in three considered both types of schedules too long. The majority of respondents said the length was "just right." Few considered either schedule short.

Nearly all of the respondents said both schedules were interesting and fewer than 1 percent considered either boring.

About one respondent in four said she had not had the experience of being interviewed previously. The topics they liked to be surveyed about were homemaking and foods. Only 6 or 7 percent of the respondents said they were hostile toward surveys. None considered either schedule "silly" or "childish" even though various types of simple pictures were used. More than half of all respondents gave educational and interest value as their reasons for preferring a particular kind of survey.

Reports from The Agricultural and Mechanical College of Texas, Data Processing Center, where the schedules were processed, indicated that the use of pictures in schedules did not impede accuracy of card punching nor did their handling appear to involve significantly different processing costs. The only suggestion offered by the data processing personnel was that a clear and consistent place be designated on the picture for code numbers.

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Location of field research units of the Texas Agricultural Experiment Station and cooperating agencies

## State-wide Research

The Texas Agricultural Experiment Station is the public agricultural research agency of the State of Texas, and is one of the parts of the A&M College of Texas.

## ORGANIZATION

IN THE MAIN STATION, with headquarters at College Station, are 13 subject matter departments, 3 service departments, 3 regulatory services and the administrative staff. Located out in the major agricultural areas of Texas are 20 substations and 10 field laboratories. In addition, there are 13 cooperating stations owned by other agencies. Cooperating agencies include the Texas Forest Service, Game and Fish Commission of Texas, Texas Prison System, U. S. Department of Agriculture, University of Texas, Texas Technological College, Texas College of Arts and Industries and the King Ranch. Some experiments are conducted on farms and ranches and in rural homes.

## OPERATION

THE TEXAS STATION is conducting about 450 active research projects, grouped in 25 programs, which include all phases of agriculture in Texas. Among these are:

Conservation and improvement of soil Conservation and use of water Conservation and use of water Grasses and legumes Sheep and goats Swine Cotton and other fiber crops Chickens and turkeys

Citrus and other subtropical fruits
Fish and game
Farm and ranch engineering

Oil seed crops
Ornamental plants
Brush and weeds
Farm and ranch business
Marketing agricultural products
Rural home economics

Insects Rural agricultural economics
Plant diseases

Two additional programs are maintenance and upkeep, and central services

Research results are carried to Texas farmers, ranchmen and homemakers by county agents and specialists of the Texas Agricultural Extension Service AGRICULTURAL RESEARCH seeks the WHATS, the WHYS, the WHENS, the WHERES and the HOWS of hundreds of problems which confront operators of farms and ranches, and the many industries depending on or serving agriculture. Workers of the Main Station and the field units of the Texas Agricultural Experiment Station seek diligently to find solutions to these problems.

Animal diseases and parasites

Joday's Research Is Jomorrow's Progress

Vegetable crops