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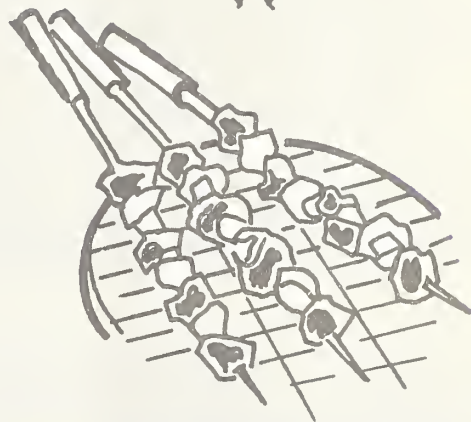
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M. W. Silke



PROMOTIONAL PROGRAMS FOR

LAMB

AND THEIR EFFECTS ON SALES

Marketing Research Report No. 522
U.S. Department of Agriculture
Economic Research Service
Marketing Economics Division



U.S. DEPT. OF AGRICULTURE
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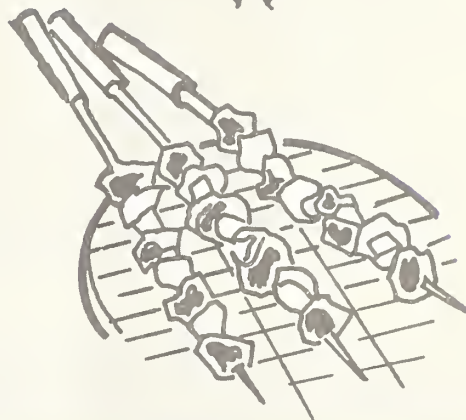
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100-3991

PREFACE

This study is a part of the Department's program of research designed to help maintain and expand the market for farm products. It is one of a group of studies conducted to provide information to aid agricultural producers in the planning of more effective promotional programs.

Appreciation is expressed to the officials of cooperating retail food organizations and meat department managers of participating stores whose active interest and cooperation made this study possible.

The American Sheep Producers Council cooperated by scheduling media advertising and arranging cooperative advertising with retailers. The Council assumed payment for the cost of their promotional activities in connection with this research.

The study was conducted under the general direction of William S. Hoofnagle. James L. Hannan aided in coordinating and supervising the field activities.

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January 1962

SUMMARY

Cooperative research with the American Sheep Producers Council, Inc., (ASPC) was conducted in 78 food supermarkets in three northeastern and three midwestern cities to evaluate the relative sales effectiveness of two promotional techniques for lamb.

Techniques tested in a controlled experiment were: (1) A consumer advertising and education program on uses of lamb sponsored directly by the American Sheep Producers Council and used regularly by them in past years to create greater consumer awareness for lamb and to obtain support of the trade; (2) a cooperative advertising arrangement with food retailers in which the Council reimbursed retailers for a portion of the cost of physical space occupied by lamb advertising within the retailers' newspaper advertisements. Control periods of no advertising and merchandising support by the Council were used as a basis for comparison.

The promotional techniques differed mainly in one respect. In the Council's regular promotion program lamb was advertised under the byline of sheep producers, and in the cooperative advertising lamb was featured under the retailers's name.

The combined lamb sales for northeastern and midwestern cities showed that weekly lamb sales per store averaged 26 percent higher for cooperative advertising and 10 percent greater for the regular promotion program than for comparable periods of no advertising and merchandising support.

Comparing the sales of lamb for the two promotional approaches, weekly sales of lamb per store in the six cities averaged 15 percent higher for the cooperative advertising arrangement with retailers than for the Council's regular promotion program. In addition, the cooperative advertising cost less than one-half as much as the regular promotion program. Taking into account both the greater increase in sales and the lower cost, the cooperative advertising was about six times as effective as the regular promotion when measured in terms of the average increase obtained for a dollar's worth of promotion.

In the three northeastern cities (areas of relatively high lamb consumption) weekly lamb sales per store were 22 percent higher for cooperative advertising and 7 percent greater for the regular promotion program compared to no promotion.

In the three midwestern cities (areas of relatively low lamb consumption) weekly sales of lamb per store averaged 48 percent higher for the cooperative advertising than for no promotion, and 27 percent higher for the Council's regular promotion program over no promotion.

A comparison of lamb sales by geographic area for the two promotional techniques favored the cooperative advertising over the regular promotion by about 14 percent in the northeastern cities and 17 percent in the midwestern cities.

Data indicated that the sales increases associated with cooperative advertising resulted from more retailer support for this promotional technique. In areas of both high and low lamb consumption, retailers devoted greater display area and newspaper advertisement space to lamb and featured lamb at a lower price (about 8 percent) during periods of cooperative advertising than during periods of either the regular promotion or no promotion. Retailers actually devoted less display space and newspaper advertisement space to lamb during regular promotion than they did during comparable periods of no promotional activity by the Lamb Council. There was only a small difference in price between the regular promotion and no promotion treatments.

Retailers in both geographical areas featured the lesser-known cuts of lamb (breast, shank, neck slices, etc.) in their weekly newspaper advertisements as well as the more popular cuts (leg, shoulder, loin chops, etc.). The mid-western retailer devoted considerably more lineage to these lesser-known cuts during the Council's regular promotion program on uses of lamb than when there was no promotional activity by the Council.

Advertising lamb did not appear to affect sales of other red meats to a significant extent. Sales of beef, veal, and pork showed no significant increase or decrease during periods of lamb promotion compared to no promotion.

PROMOTIONAL PROGRAMS FOR LAMB AND THEIR EFFECTS ON SALES

By Peter L. Henderson, James F. Hind, and Sidney E. Brown
agricultural economists
Marketing Economics Division
Economic Research Service

INTRODUCTION

The American Sheep Producers Council, Inc., was organized in 1955 as a non-profit corporation for the purpose of developing and conducting an advertising and sales promotion program for wool, sheep, and the products thereof pursuant to the National Wool Act of 1954. 1/ The responsibility for developing an effective program for lamb rests with the American Lamb Council, a division of the American Sheep Producers Council.

Since 1956, the American Lamb Council has conducted an advertising and promotional program for lamb in selected metropolitan areas of the contiguous 48 States. The Council's promotional program is developed around a consumer educational program on uses of lamb. The use of lesser-known cuts of lamb (riblets, shanks, breast, flank, neck, etc.) are given emphasis in the program.

In the past, the retailer had found low consumer demand for these lesser-known cuts and had relied heavily on the well-known cuts of lamb (leg, shoulder, loin chops, etc.) to carry the cost and profit burden. Previous research had shown that in a nationwide survey of retail stores over half of the retailers selling lamb reported difficulty in selling certain cuts, principally breast, flank, and neck. 2/ The objective of the Council's promotion program is principally to create a greater demand for lamb, but with special emphasis on the lesser-known cuts, thus allowing the retailer to spread the cost over the whole carcass rather than over a part of it. If these cuts were to carry their proportionate share of the cost of the carcass, prices of the well-known cuts of lamb probably could be brought more nearly in line with prices of comparable cuts of other red meats.

1/ As a means of self-help in marketing, the Act authorizes the Secretary of Agriculture to enter into agreements with associations or others engaged in the handling of wool, sheep, or goats, or products thereof, for the purpose of developing such programs. The Act also authorizes the Secretary, upon a favorable vote of producers, to make pro rata deductions from price support payments to producers, and the funds so deducted are used for advertising and sales promotion.

2/ Doty, H. O., Jr., Lamb Availability and Merchandising in Retail Stores. Mktg. Res. Rpt. No. 207, U. S. Dept. Agr., March 1958. p. 2.

The Council employs a combination of advertising and merchandising activities within their promotion program. Media advertising is used to publicize lamb and create greater consumer awareness for the product. A field staff specializing in lamb merchandising contacts the wholesale and retail trade to secure their support in obtaining wider distribution for lamb and to encourage larger retail lamb displays and greater retailer tie-in promotion for lamb. Home economists, located in major cities, do personal contact with clubs, women's groups, schools and colleges, and food editors of newspapers, radio, and television stressing the preparation and variety of lamb dishes. Lamb cutting specialists visit the various markets and demonstrate to meat packers and retailers efficient and profitable cutting techniques for lamb. The fieldwork is further supplemented with various public relation activities such as "kick-off" dinners to acquaint all segments of the trade with the promotional activities of the American Lamb Council, and exhibits at trade fairs and national conventions to project a favorable image of lamb to the middleman and to the consumer.

Initially, the Council's promotion program was directed to those market areas which were thought to be the best targets for increased lamb consumption. These areas were characterized by relatively high retail availability and consumer preference for lamb. But as the program was expanded, promotional efforts were extended to areas known to be traditionally low in lamb consumption, and where research pinpointed low availability of lamb at the retail level. ^{3/} The purpose of the expanded program was to assure availability and stimulate consumption.

After almost 5 years of lamb promotion by the Council, it was felt that an evaluation should be made of the effectiveness of the lamb promotion as it is, as well as to explore new advertising techniques for possible future use. The U. S. Department of Agriculture was requested to conduct the research; the Council provided its facilities and advertising funds in a supporting role.

Research was undertaken to determine:

1. The sales effectiveness of the Council's regular promotion program as compared to no promotion.
2. The relative sales effectiveness of the Council's regular promotion program and of a cooperative advertising arrangement with retailers.
3. The nature and extent of retailer support for the Council's regular promotional program and for cooperative advertising.
4. The effects of the promotion for lamb on sales of other red meats and poultry.

^{3/} Doty, see pp. 7-11 of reference cited in footnote 2.

PROCEDURE AND ANALYSIS

Treatments and Experimental Design

A controlled experiment was used to evaluate the comparative effectiveness of the selected promotional techniques. The experimental treatments were: (A) The regular promotional program of the American Lamb Council using specific media advertising supported by tie-in point-of-sale material, dealer-service work, home economists, and various public relation activities. (B) Cooperative advertising arrangements with retail food organizations in lieu of American Lamb Council's sponsored media advertising. Supporting activities were the same as for treatment A. (C) No advertising or promotion as a basis for comparison. (No type of promotional activity for lamb was sponsored or endorsed by the American Lamb Council during this treatment.)

Approximately equal dollar investment for promotional activities were allocated to the Council's regular promotion program and to cooperative advertising. Media advertising used in the regular promotion consisted mainly of metropolitan newspapers. Newspaper ads ranged from full page, 4-color "spectaculars" to 2-color, three-quarters of a page ads and two-thirds of a page black and white ads. The media advertising emphasized the use, preparation, and variety of retail lamb cuts. Approximately four newspaper advertisements were placed by the Council in each test city during the 6-week test periods.

The cooperative advertising was based on a contractual agreement between the American Lamb Council and cooperating food retailers (fig. 4 in Appendix). All food retailers advertising meat in daily papers were given the opportunity to participate; a majority did. The Council agreed to reimburse the retailer for a portion of the cost of the space devoted to lamb in the retailer's newspaper advertisements. Also, upon request, the Council furnished cooperating retailers black and white and color mats to reproduce advertisements which described preparation of lamb cuts and depicted lamb dishes. The retailer agreed to include lamb as a feature in his regular newspaper advertisements during a designated 6-week test period and to submit to the Council proof of such advertising. The monetary reimbursement made by the Council to the retailer was based on 50 percent of the local open-line newspaper rate. The maximum amount of cooperative advertising assistance a retailer could receive was determined by his total dollar business for all food items relative to that of all participating food retailers in a particular market area as determined by local newspaper surveys.

Supporting merchandising activities of dealer-service work and home economists were essentially the same for the regular and cooperative advertising program. The Council's fieldmen publicized the two promotion programs by soliciting the help of packers in distributing merchandising aids and generating retailer interest. These men also furnished retailers with point-of-sale material (posters, banners, recipe folders, etc.) designed to draw attention to lamb displays and encourage consumers to purchase lamb. Lamb cutting specialists demonstrated to retailers various methods of preparing and displaying different cuts of lamb. Home economists gave lectures and cooking demonstrations on television, in schools, and before local women's groups. They passed out taste samples and recipe folders in retail stores stressing the uses and preparation of a variety

of lamb dishes. Publicity material emphasizing the general uses of lamb was furnished to and used by food editors of newspapers, television, and radio.

A double change-over experimental design was used in assigning the treatments to the six test cities and three time periods (table 1). In each group of three cities (square I and II) each treatment appeared once in each city and 6-week time period. This assignment of treatments equalized the differences in sales associated with cities and seasonality; thus, more precise estimates of treatment effects could be obtained. Using this design, relevant comparisons of the sales effectiveness of the three treatments under repeated and comparable conditions could be made.

Sample and Controls

Time periods of 6 weeks each were selected to give the Council ample time to intensify and repeat their promotional efforts, and also to permit the retailer ample opportunity to plan and tie in his advertising and merchandising activities around the regular and cooperative advertising programs.

Six cities having a minimum population of 125,000 were selected as test markets. Three cities representing relatively high levels of lamb consumption were located in the Northeast (Philadelphia, Pa., Syracuse, N. Y., and Springfield-Holyoke, Mass.). Three cities of relatively low lamb consumption were located in the Midwest (St. Louis, Mo., Omaha, Nebr., and Des Moines, Iowa). The cities represented each geographical area on the basis of major economic characteristics. The availability of lamb in quantity and quality was considered to be comparable among cities within each area.

The Council had had a promotional program in the northeastern cities in past years. While lamb consumption is higher there than in most other areas, it is low compared to sales of other meats. In areas of this type, the problem facing the Council is to increase consumer awareness for lamb and obtain retailer support in featuring lamb more frequently. In the midwestern cities, the Council had introduced promotion only shortly before the experiment was started. The paramount problem is to create a more favorable image for lamb with consumers and to secure cooperation of the retailers in properly displaying and making lamb available to consumers in greater quantity.

A panel of 15 self-service food supermarkets was selected from the cooperating retail firms in the 2 larger cities, Philadelphia and St. Louis, and 12 supermarkets in each of the remaining 4 cities. Weekly sales of sample stores ranged from \$15,000 to \$80,000. Stores were distributed by size and type of management and ownership (corporate, cooperative, voluntary chains, and independents). The stores were distributed geographically within metropolitan areas to represent the various income and ethnic groups.

Field representatives of the Council encouraged cooperating retail firms to plan their advertising and merchandising activities in concert with the planned promotional programs. Specifically, this included: (1) Tying in store promotions of lamb with the promotional activities of the Council when the Council was using its regular advertising program and (2) using media advertising in accordance with the cooperative advertising agreement.

Table 1.--Double change-over experimental design used in lamb promotion study, 78 supermarkets in 3 midwestern and 3 northeastern cities, three 6-week time periods falling between September 6, 1960, and February 11, 1961

	Midwestern cities (square I)			Northeastern cities (square II)		
6-week time periods:	St. Louis, Mo.	Omaha, Nebr.	Des Moines, Iowa	Philadelphia, Pa.	Syracuse, N.Y.	Springfield-Holyoke, Mass.
September 6 through October 15	(A) Regular promotion	(B) Cooperative advertising	(C) No sponsored promotion	(A) Regular promotion	(B) Cooperative advertising	(C) No sponsored promotion
October 17 through November 26	(B) Cooperative advertising	(C) No sponsored promotion	(A) Regular promotion	(C) No sponsored promotion	(A) Regular promotion	(B) Cooperative advertising
Holiday season omitted						
January 2 through February 11	(C) No sponsored promotion	(A) Regular promotion	(B) Cooperative advertising	(B) Cooperative advertising	(C) No sponsored promotion	(A) Regular promotion

Researchers emphasized to the cooperating retailers that they should try to support the programs of the Council only to the extent that they would under normal circumstances, without concern for the research. Also, during periods when the Council was not actively promoting lamb, retailers were requested to follow their normal advertising and merchandising practices for lamb.

Collection of Data

The volume (pounds) of lamb, beef, veal, pork, and poultry sold by each store during a 6-week test period was determined by the standard audit method. ^{4/} Supplementary data on merchandising practices employed by panel stores were obtained by observation. The merchandising practices were observed on Thursday, Friday, and Saturday of each week to reflect the store's merchandising policies when greatest sales volume occurred and when weekend "specials" were being featured. These data included price of meat, amount of display area, amount of newspaper advertisement space devoted to lamb and the other meats, and extent and use of point-of-sale materials and special displays. In addition, data on total store sales and meat department sales were collected weekly from each store.

Statistical Analysis

Analysis of variance was made of the sales data for each of the meats studied (lamb, beef, veal, and pork) to separate the variations in sales that were attributable to cities, time periods, and treatments. The "F" test was used to determine if variations in sales among the three treatments were statistically significant. The least significant difference statistical test was used to detect significant sales differences between any two treatments. These same techniques were used to evaluate the difference in prices and other merchandising practices for lamb between the test treatments. ^{5/}

Provisions were made to adjust the sales of each meat for sources of variation which were not completely controlled by the experimental design, such as variation in weather conditions among cities within each time period. Total store sales (dollars) were used as index of customer traffic and purchasing

^{4/} Standard audit method: (Beginning inventory + receipts) - (ending inventory + transfers + withdrawals + spoilage) = sales.

^{5/} A technical discussion of the analysis of variance and statistical tests as used in this study is given by Cochran, W. G. and Cox, G. M., Experimental Designs. John Wiley & Sons, Inc. 1957. pp. 76 and 135-139.

The application of these techniques in market research is described more fully by Henderson, P. L., Brown, S. E., and Hind, J. F. in Special Promotional Programs for Apples, Their Effects on Sales of Apples and Other Fruit, Mktg. Res. Rpt. No. 446, U.S. Dept. Agr. Jan. 1961. pp. 1-13.

Also, for an application of the double change-over experimental design in a refined form (i.e., to measure 1-period carry-over effects of a treatment) and a formulation of the analysis of variance, see article by Henderson, P. L., Hind, J. F., and Brown, S. E., Sales Effects of Two Campaign Themes, Jour. Advertising Res. Vol. 1, No. 6, Dec. 1961. pp. 2-8.

power to reflect such variation. However, no adjustments were necessary since factors influencing the number of customers patronizing the stores and their purchasing power were relatively stable within each geographical area during the course of the study.

Sales data for poultry, while collected, were not considered in this analysis. The uneven and nonconstant effects of the Thanksgiving holiday season among the test cities distorted sales comparisons between treatments and greatly limited the validity of any conclusions relative to poultry sales during the test.

FINDINGS

Effects of Lamb Promotion on Sales of Lamb

The analyses of lamb sales indicated that in areas of both relatively high and low lamb consumption the promotion sponsored by the American Lamb Council did affect sales significantly. A substantial sales increase was associated with both the Council's regular promotion program and the cooperative advertising arrangement with retailers. The Council's regular promotional program showed about a 10 percent increase in sales, compared to periods of no promotional effort by the Council, while the cooperative arrangement had an increase of 26 percent (table 2). A comparison of sales for the two promotional approaches favored the cooperative advertising by about 15 percent. These sales increases were statistically significant. ^{6/}

In comparing sales differences between treatments (cooperative advertising, regular promotional program, and no promotion) it was assumed that differences in prices and merchandising practices employed by the stores for each treatment were associated with the presence or absence of advertising for lamb and were part of the treatment.

Purchasing power and number of customers patronizing the stores were relatively stable among treatments in northeastern and midwestern cities. No adjustments in sales of lamb for these factors were necessary.

Nature and Extent of Retailer Support

The greater sales volume of the cooperative promotion over the regular promotional program, or no promotion, appeared to result from the difference in retailer support of the two programs. The merchandising and advertising practices of retailers indicated that retailers preferred the cooperative promotion and the financial support it provided for their advertising. During periods

^{6/} Specifically, the probability of concluding that sales increases had resulted from promotion when they actually occurred from chance fluctuations and noncompensating errors of measurement in sales were: Less than 1 in 20 for the increase of cooperative advertising over no advertising; 1 in 10 for the increase of cooperative advertising over the Council's regular advertising; and 1 in 4 for the increase in sales with regular advertising over no advertising.

Table 2.--Sales of lamb during lamb promotion tests, 78 supermarkets in 3 northeastern and 3 midwestern cities, three 6-week time periods falling between September 6, 1960, and February 11, 1961

Area	Average sales per store per week				Difference in sales between-- 1/					
	With no promotion of lamb		With retail cooperative advertising		With Council's regular promotion program		No promotion and--		Retail cooperative advertising and Council's regular promotion program	
	Lb.	Lb.	Lb.	Lb.	Lb.	Pct.	Lb.	Pct.	Lb.	Pct.
Northeastern cities:										
Philadelphia, Syracuse, and Springfield.....	841	1,028		899	187	22.2	58	6.9	129	14.3
Midwestern cities:										
St. Louis, Omaha, and Des Moines.....	154	228		195	74	48.1	41	26.6	33	16.9
Average.....	498	628		547	130***	26.1	49*	9.8	81**	14.8

1/ Differences required for statistical significance between promotional techniques and no promotion for total lamb sales at 25 percent probability level* = 48 pounds; at 10 percent probability level** = 77 pounds; at 5 percent probability level*** = 100 pounds.

when cooperative advertising was offered, retailers devoted more newspaper linage to lamb (fig. 1) and advertised it more frequently than during periods of either regular promotion or no promotion. In addition, lamb was featured at a lower price (about 8 percent) and given slightly more display area in the meat case (fig. 2). In the Midwest, where some stores did not stock lamb consistently, there was a wider distribution of lamb during the cooperative period. Thus, the cooperative arrangement obtained a higher volume of sales than the regular promotion by generating more retailer sales support.

While the increase in lamb sales was not as substantial for the regular advertising program of the Council, it illustrated more specifically the effectiveness of the Council's promotional efforts on consumer purchase behavior. In contrast to cooperative advertising, the Council's regular promotion program received less retailer support in terms of display area, price reduction, and newspaper linage for lamb than no promotion (table 3). That is, in general, retailers exerted more effort on behalf of lamb during the period when the Council was inactive than during comparable periods when its regular promotion was employed. Therefore, the fact that greater lamb sales occurred during periods of regular promotion than in comparable periods of no promotion indicates the effectiveness of the Council's regular promotion in stimulating consumer demand. Thus, it appears the Council's advertisements in newspapers directly influenced the consumers' desire for lamb. These findings do not support the hypothesis that only advertising under a store byline and featuring a special price is effective in reaching the consumer.

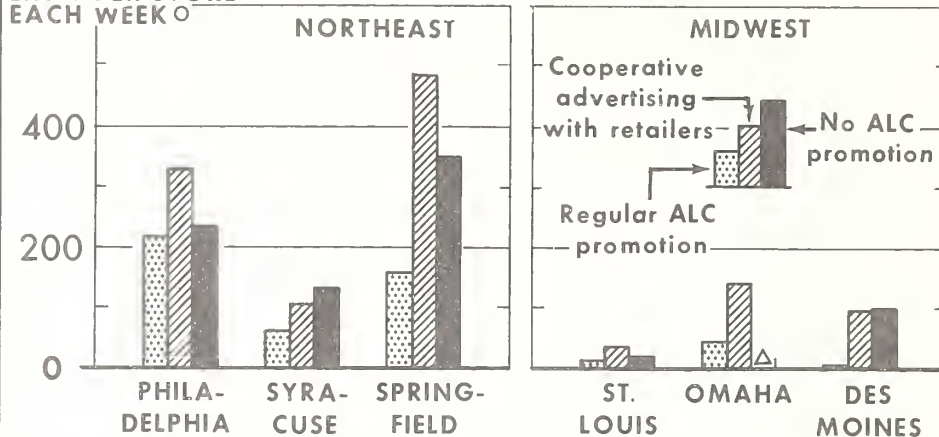
Promotional Costs Versus Sales Increases

A dollar spent for the cooperative promotional program was six times as effective in sales gains as was the same amount spent for the Council's regular promotional program. The total cost of the regular promotion in the 6 cities for a 6-week period was \$39,523. For a comparable period, the expenditure for cooperative promotion was \$17,669. The costs of supporting promotional activities (dealer-service representatives, home economists, point-of-sale material) were approximately the same for each program. The difference in costs of the two programs is due to the difference in the amount of money expended for media advertising sponsored directly by the Council and that given retailers through the cooperative advertising arrangement. The costs of the program would have been equal had the American Lamb Council been billed for all newspaper linage for which retailers contracted. However, retailers requested only 32 percent of the promotional funds allocated by the Council for participating retailers. Most retailers did not advertise lamb enough to obtain the maximum amount of funds allotted them. In most instances cooperating retailers would have had to feature lamb every week in a 6-week test period to qualify for the funds allocated under the cooperative arrangement, which would be unrealistic in terms of normal operations. Also, some retailers did not bill the Council for their due portion of the advertising allowance. They apparently were confused on when and how they could apply for the allowance, even though the procedure was explained in the contract and orally at the time of agreement. It is likely that the cost of cooperative advertising would be greater if the arrangement was offered on a continuing basis, and retailers became more familiar with the procedure.

During American Lamb Council Promotion Tests*

RETAILER NEWSPAPER ADVERTISING LINAGE FOR LAMB

LINES PER STORE
EACH WEEK ○



*THREE 6-WEEK TEST PERIODS FALLING BETWEEN SEPT. 6, 1960 AND FEB. 11, 1961.

○ BY 78 SUPERMARKETS IN THREE NORTHEAST AND THREE MIDWEST CITIES.

△ NO PROMOTION BY RETAILERS.

U. S. DEPARTMENT OF AGRICULTURE

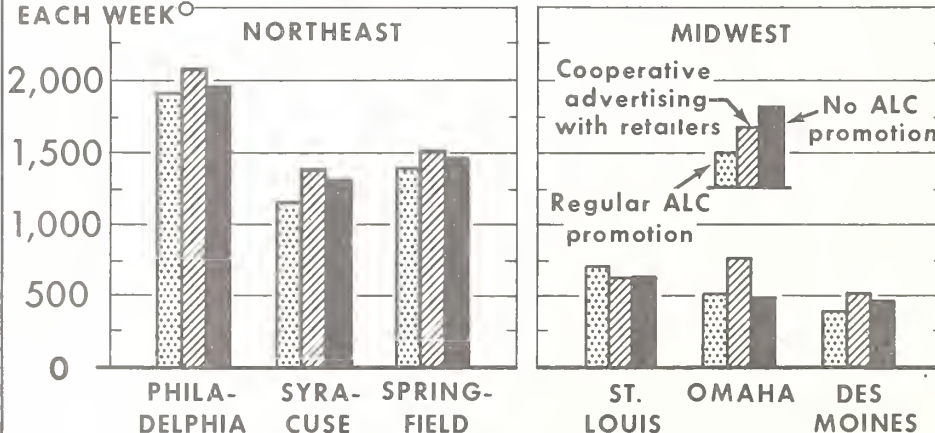
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Figure 1

During American Lamb Council Promotion Tests*

AMOUNT OF RETAIL DISPLAY SPACE ALLOTTED TO LAMB

SQ. IN. PER STORE
EACH WEEK ○



*THREE 6-WEEK TEST PERIODS FALLING BETWEEN SEPT. 6, 1960 AND FEB. 11, 1961.

○ BY 78 SUPERMARKETS IN THREE NORTHEAST AND THREE MIDWEST CITIES.

U. S. DEPARTMENT OF AGRICULTURE

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Figure 2

Table 3.--Retail carcass price, display area, and newspaper advertising lineage for lamb during lamb promotion tests, 78 supermarkets in 3 northeastern cities and 3 midwestern cities, three 6-week test periods falling between September 6, 1960, and February 11, 1961 1/

Merchandising factor	Weekly averages per store--			Differences in factor between--			
	With no promotion of lamb	With retail cooperative advertising	With Council's regular promotion program	No promotion and--		Retail cooperative advertising and Council's regular promotion program	
	Ct./lb.	Ct./lb.	Ct./lb.	Pct.	Pct.	Pct.	Pct.
Price: 2/							
Northeast cities...	78.3	71.8	76.2	-8.3	-2.7	-5.8	
Midwest cities....	77.0	70.8	77.4	-8.1	0.5	-8.5	
Average.....	77.6	71.3	76.8	-8.1	-1.0	-7.2	
Display space:							
Northeast cities...	Sq. in. 1,604	Sq. in. 1,692	Sq. in. 1,520	Pct. 5.5	Pct. -5.2	Pct. 11.3	
Midwest cities....	542	641	549	18.3	1.3	16.8	
Average.....	1,073	1,166	1,034	8.7	-3.6	12.8	
Newspaper advertisement space: 3/							
Northeast cities...	Lines 240	Lines 311	Lines 152	Pct. 29.6	Pct. -36.7	Pct. 104.6	
Midwest cities....	39	89	20	128.2	-48.7	345.0	
Average.....	139	200	86	43.9	-38.1	132.6	

1/ Northeast cities: Philadelphia, Syracuse, and Springfield; Midwest cities: St. Louis, Omaha, and Des Moines.

2/ Weekly prices observed for each retail cut of lamb were weighted by its proportion of total carcass (ignoring bone waste and shrinkage) and store sales volume of lamb.

3/ Newspaper advertising lineage for each cooperating retail food firm was allocated in total to each sample store representing that firm.

Lamb Sales in Midwest Versus Northeast

The sales response to lamb promotion was more pronounced on a percentage basis in the Midwest than in the Northeast. The tonnage increase was greater, however, in the Northeast. The higher percentage increase in sales in the Midwest was understandable, since the sales volume without promotion was small in this area. The Midwest showed a 27 percent sales increase for the regular promotion by the Council over no promotion, while the northeastern cities had a 7 percent increase in lamb sales. For the cooperative advertising treatment, the percentage sales increases over no promotion were 48 percent for the Midwest and 22 percent for the Northeast.

In the Northeast cities, the ratio of sales increases over no promotion was more than 3 to 1 in favor of the cooperative advertising over the Council's regular promotion program. Whereas, in the Midwest cities the ratio of sales increases for the promotional approaches was slightly less than 2 to 1 in favor of the cooperative advertising. Thus, the relative sales response to the cooperative advertising over the regular promotion was approximately 50 percent greater in the Northeast cities than in the Midwest cities. Conversely, it can be reasoned that the regular program was more effective in the Midwest cities than in the Northeast cities.

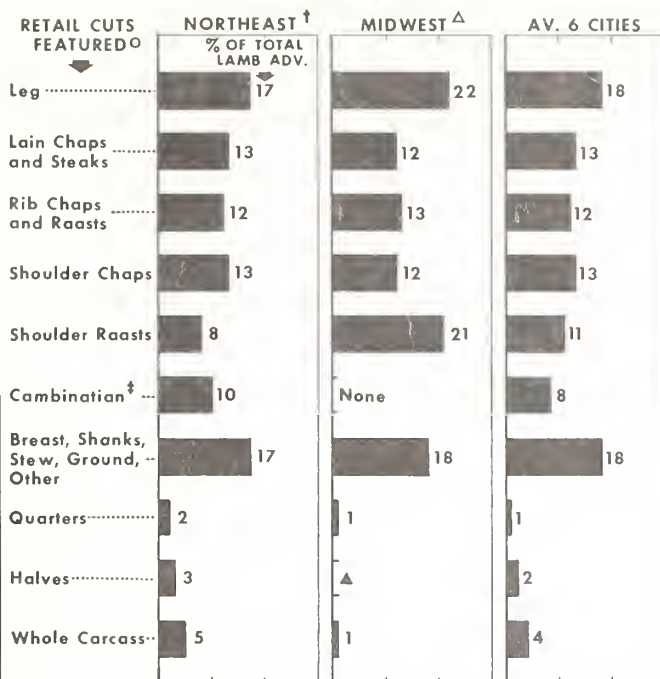
Retail Lamb Cuts Featured by Retailers

In the Midwest, cooperators gave considerably more newspaper lineage to the breast and stewing cuts during the regular promotion than during either cooperative advertising or no promotion. During regular promotion, Lamb Council advertisements in newspapers featured recipes for such dishes as "Shepherds' Pie," "Baked Lamb Stew," "Stuffed Lamb Breast with Apricot Dressing," etc. Normally, lamb leg and shoulder roast were the popular cuts advertised by retail stores in the Midwest. Shoulder roast was featured less than 10 percent of the time in the Northeast, while leg and the stewing cuts were the leading retail cuts advertised. This emphasis on the lesser-known cuts of lamb by retailers reflects results of current and past promotional efforts of the Council in these areas. The relative importance of cuts featured in each area and for both areas combined is shown in figure 3.

Effects of Lamb Promotion on Sales of Other Red Meats

Promotion of lamb did not appreciably affect sales of beef, veal, and pork in total (table 4). Statistical tests indicated no significant variation in sales of these meats regardless of whether the American Lamb Council did or did not advertise lamb. This is not to say that when lamb was featured in a store's weekly newspaper advertising, sales of other red meats did not vary. But during a 6-week period in which the retailer normally featured beef, veal, and pork as well as lamb, total sales of each of the other meats did not vary to a significant extent. This constancy of the sales of other red meats indicated that the gain in lamb sales during a 6-week promotional period was not due to customers substituting lamb for other meats.

NEWSPAPER ADVERTISING DEVOTED TO SELECTED LAMB CUTS



* THREE 6-WEEK TEST PERIODS FALLING BETWEEN SEPT. 6, 1960 AND FEB. 11, 1961.

○ BY 78 SUPERMARKETS IN THREE NORTHEAST AND THREE MIDWEST CITIES.

† PHILADELPHIA, SYRACUSE, SPRINGFIELD.

Δ ST. LOUIS, OMAHA, DES MOINES.

‡ SHOULDER AND STEW CUTS PACKAGED IN COMBINATION.

▲ LESS THAN 0.5%

U. S. DEPARTMENT OF AGRICULTURE

NEG. ERS 763-61 (112) ECONOMIC RESEARCH SERVICE

Figure 3

LIMITATIONS AND USES OF FINDINGS

In formulating a promotional program using the sales and cost results from this study, other factors should also be considered in determining which promotional approach (Council's regular promotion, cooperative advertising, or a combination of both) to use, and to what extent and when and where each should be used. The factors for each approach include: (1) Probable long-term effects; (2) The image projected to the consumer; (3) Operational features; and (4) Marketing problems facing the Council in a particular area or market.

It should be emphasized that the analysis and findings consider only the short-run sales effects of the Council's regular promotion program and cooperative advertising. These findings do not establish which approach will yield the greatest sales of lamb over a longer period of time. For example, the cooperative advertising arrangement to promote and sell lamb was a novelty to the retailer in that it had never before been offered. This, coupled with the monetary incentive provided the retailer by the arrangement, might have caused him to favor cooperative advertising during a 6-week test period more so than he would have normally. After becoming acquainted thoroughly with its use and effectiveness, the retailer may or may not continue to support enthu-

siastically the cooperative advertising arrangement. Possibly, with time the Council's regular promotion program would generate more retailer support through its appeal to consumer demand and have a greater cumulative effect.

In addition, consideration should be given to the image that these promotional approaches convey to the consumer. When media advertising is sponsored directly by the Council, the image presented to the consumer is a product appeal associated with the producer group. When the advertising for lamb is featured under the retailer's name, the appeal is mainly through a price concession associated with the local store.

In considering the operation of the promotional approaches, each has certain limitations. Some drawbacks to cooperative advertising are: (1) It is administratively difficult because all retailers must be contacted to insure compliance with Robinson-Patman Act, and a great amount of record keeping and account correspondence is required. 7/ (2) The likelihood that once it is started, the retailer would insist on continued cooperative assistance--it possibly could not be stopped without a substantial reduction in retailer advertising for lamb. (3) The possibility of jeopardizing a working relationship with the retailer if he becomes dissatisfied with the amount of advertising allowance received compared to that given other retailers, regardless of the legality of the arrangement.

Some limitations to the promotional program regularly used by the Council in the past are: (1) It is difficult to obtain retailer support in securing retail availability for lamb and featuring lamb as an "advertised special"; (2) It may tend to concentrate retailer promotions for lamb during periods of Council advertising; and (3) The Council pays the full cost of newspaper advertising at a national rate rather than sharing the cost with the retailer at a lower local rate.

In spite of these limitations, the findings suggest an important role for each promotional approach. When and where and how much to use cooperative advertising, the Council's regular promotion program or a combination of the two depends on the marketing problems facing the Council in a particular market or area. In cities similar to the ones in the Midwest where lamb is in a pioneering stage of advertising, the Council faces a tremendous task in obtaining wider distribution and greater retailer support for lamb. In addition, consumer demand for lamb must be created. While most emphasis could be placed on cooperative advertising to gain entrance and shelf space for lamb, strong emphasis would also be placed on a consumer-directed education program and publicity on uses of lamb. There would be less need, however, to increase consumer acceptance for lamb through product appeal in areas of relatively high lamb consumption such as the Northeast cities. Here the product has reached somewhat of a competitive stage of advertising, and the consumer who already eats lamb might be more attracted by price appeal through retail cooperative advertising than by product appeal through producer advertising.

7/ The Robinson-Patman Act requires that all advertising allowances offered one retailer must be made available on "proportionally" equal terms to all retailers within the same competitive market. The Act is administered by the Federal Trade Commission in Washington, D. C.

Table 4.--Sales of beef, veal, and pork during lamb promotion tests, 78 supermarkets in 3 northeastern and 3 midwestern cities, three 6-week time periods falling between September 6, 1960, and February 11, 1961 1/

Meat	Average sales per store per week			Differences in sales between-- <u>2/</u>		
	With no promotion of lamb	With retail cooperative advertising		No promotion and--	Retail cooperative advertising	Council's regular promotional program
	Lbs.	Lbs.	Lbs.	Lbs.	Pct.	Pct.
Beef.....	6,146	6,173	6,390	27	0.4	4.0
Veal.....	238	241	273	3	1.3	14.7
Pork <u>3/</u>	2,510	2,694	2,730	184	7.3	8.8
Total or average (all meats).....	8,894	9,108	9,393	214	2.4	5.6

1/ Sales combined for Northeast and Midwest cities.

2/ Observed sales differences were not statistically significant at an acceptable probability level.

3/ Includes fresh and cured pork, excludes bacon.

In view of the greater retailer support obtained through cooperative advertising, paying the retailer a part of the cost of featuring lamb in his weekly newspaper advertising also could be a useful promotional technique to move exceptionally heavy supplies of lamb. For example, during periods of excessive inventories (such as spring 1961) cooperative advertising could be used in a "crash" or special promotional campaign to generate retailer interest and speed up movement into consumption. 8/

8/ In the spring of 1961, inventories of lamb were excessive, and the average price received by farmers was the lowest since 1946. An unusual marketing pattern was responsible largely for this situation. Weather conditions were favorable for earlier than usual development of new crop lamb in some parts of the country, and these began coming to the market before the bulk of the fed lambs had been marketed. Between March and July, the Department of Agriculture purchased nearly 12.4 million pounds of lamb to ease the situation.

APPENDIX

AMERICAN LAMB COUNCIL
Division of AMERICAN SHEEP PRODUCERS COUNCIL, INC.
520 Railway Exchange Building, Denver, Colorado

COOPERATIVE ADVERTISING AGREEMENT
(Under USDA Research Project "Evaluation of The Effectiveness
of Various Promotional Themes and Techniques on Lamb Sales")

_____ 19____			
_____ (Advertiser)	_____ PLEASE PRINT	_____ (address)	_____ PLEASE PRINT
_____ (city)	_____ (state)	_____ (Number of stores)	_____ (Grocery Classification)

For and in consideration of the mutual conditions herein contained, the AMERICAN LAMB COUNCIL agrees to reimburse the undersigned advertiser for a portion of the physical space occupied in advertising lamb within newspapers, based on 50% of the local open line newspaper rate, to be published between _____ 19____ and _____ 19____, such reimbursement not to exceed the total sum of \$_____ for this period, provided the advertiser conforms to the following conditions:

1. The advertiser agrees to insert his own lamb advertising in his local newspaper/s during the above period.
2. The advertiser agrees to submit, not later than 10 days after the above period, full-page newspaper tear pages containing the advertisements, such pages to show the name of the newspaper and the date.
3. Tabulation of total lamb lineage for each newspaper and local open line rate for that newspaper.

The AMERICAN LAMB COUNCIL will reimburse the undersigned advertiser within 10 days after receipt of required evidence of lamb advertising in accordance with this agreement.

It is further understood that this agreement is subject to the provisions of any Federal or State statute, or Municipal ordinance, in effect during the life of this contract and the AMERICAN LAMB COUNCIL and the ADVERTISER mutually agree that this contract is void if, and to the extent that, it violates such statute or ordinance.

This agreement is effective only within the dates specified above.

_____ American Lamb Council Representative's Signature	_____ Advertiser's Signature		
_____ Title	_____ Date	_____ Title	_____ Date

Figure 4

Table 5.--Analysis of variance, lamb sales in pounds, 78 supermarkets in 3 northeastern and 3 midwestern cities, three 6-week time periods falling between September 6, 1960, and February 11, 1961

Source of variation	Degrees of freedom	Sums of squares	Mean square	F ratio $\frac{1}{2}$
Variance between squares:	1	14,609,387,113	14,609,387,113	605.87***
Periods within squares...	4	341,671,407	85,417,852	----
Between periods.....	2	241,374,363	120,687,182	5.01*
Periods x squares.....	2	100,297,044	50,148,522	2.08
Cities within squares....	4	9,809,528,226	2,452,382,056	101.70***
Treatments:				
Direct effect treatments (unadjusted)...	2	316,650,218	158,325,109	6.57**
Residual effect treatments (adjusted)....	2	146,304,439	73,152,220	3.03
Direct effects (adjusted).....	2	249,484,746	124,742,373	----
Residual effects (unadjusted).....	2	213,469,911	106,734,956	----
Error.....	4	96,453,042	24,113,260	----

$\frac{1}{2}$ Asterisks denote levels of significance: ***1 percent probability; **5 percent probability level; and *10 percent probability level.

Table 6.--Analysis of variance, beef sales in pounds, 78 supermarkets in 3 northeastern and 3 midwestern cities, three 6-week time periods falling between September 6, 1960, and February 11, 1961

Source of variation	Degrees of freedom	Sums of squares	Mean square	F ratio <u>1/</u>
Variance between squares:	1	23,423,996,401	23,423,996,401	23.10***
Periods within squares...	4	8,055,421,504	2,013,855,376	----
Between periods.....	2	6,599,450,169	3,299,725,084	3.25
Periods x squares.....	2	1,455,804,025	727,902,012	.72
Cities within squares....	4	165,060,188,176	41,265,047,044	40.69***
Treatments within squares.....	4	2,084,470,336	521,117,584	----
Between treatments.....	2	830,650,041	415,325,020	.41
Treatments x squares...	2	1,254,009,744	627,004,872	.62
Error.....	4	4,056,033,969	1,014,008,492	----

1/ Asterisks denote level of significance: ***1 percent probability level.

Table 7.--Analysis of variance, veal sales in pounds, 78 supermarkets in 3 northeastern and 3 midwestern cities, three 6-week time periods falling between September 6, 1960, and February 11, 1961

Source of variation	Degrees of freedom	Sums of squares	Mean square	F ratio $\frac{1}{2}$
Variance between squares:	1	1,097,242,627	1,097,242,627	42.47***
Periods within squares..:	4	40,162,426	10,040,606	----
Between periods.....:	2	28,977,492	14,488,746	.56
Periods x squares.....:	2	11,184,934	5,592,467	.22
Cities within squares...:	4	2,572,612,007	643,153,002	24.90***
Treatments within squares.....:	4	40,370,705	10,092,676	----
Between treatments.....:	2	28,241,371	14,120,686	.55
Treatments x squares...:	2	12,129,334	6,064,667	.23
Error.....:	4	103,335,105	25,833,776	----

$\frac{1}{2}$ Asterisks denote level of significance: ***1 percent probability level.

Table 8.--Analysis of variance, total pork sales in pounds, 78 supermarkets in 3 northeastern and 3 midwestern cities, three 6-week time periods falling between September 6, 1960, and February 11, 1961 1/

Source of variation	Degrees of freedom	Sums of squares	Mean square	F ratio <u>2/</u>
Variance between squares:	1	6,249,620,000	6,249,620,000	27.43***
Periods within squares..	4	274,540,000	68,635,000	----
Between periods.....	2	70,950,000	35,475,000	.16
Periods x squares.....	2	203,590,000	101,795,000	.45
Cities within squares....	4	126,813,360,000	31,703,340,000	139.14***
Treatments within squares.....	4	1,073,320,000	268,330,000	----
Between treatments.....	2	1,017,870,000	508,935,000	2.23
Treatments x squares..	2	55,450,000	27,725,000	.12
Error.....	4	911,430,000	227,857,500	----

1/ Total pork sales include fresh and cured pork, excludes bacon.

2/ Asterisks denote level of significance: ***1 percent probability level.

Table 9.--Analysis of variance, combined sales of beef, veal, and pork in pounds, 78 supermarkets in 3 northeastern and 3 midwestern cities, three 6-week time periods falling between September 6, 1960, and February 11, 1961

Source of variation	Degrees of freedom	Sums of squares	Mean square	F ratio <u>1/</u>
Variance between squares:	1	15,986,567,844	15,986,567,844	3.71
Periods within squares...	4	6,720,392,484	1,680,098,121	----
Between periods.....	2	5,855,004,324	2,927,502,162	.68
Periods x squares.....	2	869,306,256	434,653,128	.10
Cities within squares...	4	440,914,592,196	110,228,648,049	25.59***
Treatments within squares.....	4	5,127,132,816	1,281,783,204	----
Between treatments.....	2	3,340,608,804	1,670,304,402	.39
Treatment x squares...	2	1,793,861,316	896,930,658	.21
Error.....	4	17,232,863,076	4,308,215,769	----

1/ Asterisks denote level of significance: ***1 percent probability level.

