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CONSUMER POULTRY MEAT STUDIES IN THE NORTHEAST

Compiled by
RICHARD F. SAUNDERS



An attractive, well-stocked display of poultry meat in a Portland, Maine, supermarket caught this pretty customer's eye.

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CONTENTS

	PAGE
CONSUMER BUYING PRACTICES FOR POULTRY	7
CONSUMERS MAKE THEIR POULTRY BUYING PRACTICES KNOWN	7
Poultry Meat is Third Choice	8
Poultry Served Primarily on Sunday and Holidays	8
Stores the Main Source of Poultry Meat	9
High Income Families Use More Chicken	9
Small Families Eat More Chicken	10
Hebrew and Non-White Families Best Poultry Customers	10
Size of Bird Purchased Varies	11
Consumers Resist Frozen Poultry	11
Fleshing and Color Important to Housewives	11
THE JOB OF RETAILING POULTRY MEAT	12
Fryers Best Sellers	12
Eviscerated Birds Outsell New York Dressed	13
Retailers Find Resistance to Frozen Poultry	13
Poultry a Weekend Item	14
Competition from Other Meats	14
Follow-the-Leader Pricing Policy	15
Margins Vary	15
Pricing Parts Presents a Problem	15
Poultry Frequently Not Available to Customers	16
Quality, Packaging and Advertising Boost Sales	16
NATURE AND SCOPE OF STUDIES	17
LITERATURE CITED	19

FOREWORD

Revolutionary changes in the poultry industry have made it increasingly important that the production and distribution of poultry meat and eggs be oriented as nearly as possible to consumer preferences and market demand for these products. To assist the poultry industry in meeting the demands of consumers, individual states and the northeast region in cooperation with federal agencies have pursued a number of research projects covering many phases of poultry marketing. The subcommittee of the Northeast Regional Poultry Marketing Committee considering the project "Consumer Preferences for, Consumer Purchases of, and the Market Demand for Poultry Products" at a meeting in October 1953 at the University of Maryland, decided to bring together in summary form the work completed and under way by research workers in the northeast. A representative of each of the states and federal agencies cooperating in this sub-project agreed to submit information to the Maine Station for summarization. Dr. Richard Saunders of the Maine Station has reviewed the material submitted and has prepared this report.

It is hoped that this summarization dealing with poultry meat will serve a useful purpose to the poultry industry and to research workers in the northeast as well as those in other sections of the country.

States cooperating and leaders were:

Delaware—Raymond C. Smith

Maine—Charles H. Merchant Project Leader, and
Richard Saunders

Maryland—Harold Smith

New York—L. B. Darrab

Rhode Island—Fred R. Taylor and A. L. Owens

West Virginia—Norman Nybrotten

AMS, USDA—E. H. Matzen and H. S. Kahle

Chairman, Technical Committee—R. L. Baker

Administrative Adviser—G. M. Worrilow

SUMMARY

A review of consumer poultry studies in the northeast reveals these conclusions:

1. A majority of consumers purchase beef, pork, and chicken in that order of frequency.
2. Main reasons housewives give for buying chicken less frequently than beef and pork are, "Tired of Chicken," "Chicken too high in price relative to other meats,"¹ and "Chicken on display did not have a good appearance."
3. Poultry meat is still considered a Sunday and holiday dish by most housewives. With more poultry being purchased cut-up and as parts, chicken is gradually becoming more than a week-end item.
4. Most housewives obtain their poultry from retail grocery stores.
5. Families with higher incomes generally consume more poultry meat, use lighter weight birds, buy more dressed birds and ready-to-cook birds than do low income families.
6. Large families use less poultry meat, buy less eviscerated poultry and chicken parts than do small families.
7. Jewish and non-white families consume more poultry meat than others.
8. Purchases of different size birds not only vary geographically but also vary among housewives in a given area, and are related to age of the consumer.
9. There are signs that consumer resistance to frozen poultry is lessening. High income families tend to accept frozen poultry more readily than do low income people.
10. Plumpness and skin color are the main things housewives look for when selecting a chicken. Housewives object strongly to evidences of poor bleeding and bruising in poultry.
11. Retail grocery stores commonly sell more broilers and fryers than other types of poultry meat.
12. At Thanksgiving and Christmas, sales of turkeys and roasting chickens increase largely at the expense of fryer sales.
13. Many stores in the northeast have discontinued selling New York dressed birds. In stores still selling New York dressed birds, eviscerated poultry outsells New York dressed about 3 to 1.

¹Chicken is priced more favorably relative to other meats now (1954) than when the survey was made in 1950.

14. One important reason why retailers do not handle more frozen poultry is its high price in relation to New York dressed birds and fresh, eviscerated poultry.
15. There appears to be some substitution between fryers and pork loin, but very little substitution between fryers and beef.
16. Retail mark-up on poultry varies between stores, with day of week, and with type of product.
17. The pricing of chicken parts has become a real problem to retailers as the volume of this method of processing is growing rapidly.
18. A variety of poultry meats frequently is not available to consumers even in large supermarkets.
19. Sales of fryers can be increased by offering cut-up, whole fryers plus parts; by packaging cut-up whole fryers; by adding an attractive, colored label to the package; and by displaying attractively packaged fryers in a refrigerated aisle display table.

BULLETIN 536

**CONSUMER POULTRY MEAT STUDIES
IN THE NORTHEAST**

Compiled by

RICHARD SAUNDERS²

CONSUMER BUYING PRACTICES FOR POULTRY

The importance of orienting production and marketing services with consumers' demands is more clearly understood now than it has been in past years. Since World War II marketing researchers in the northeast region have cooperated in studying consumer preferences and buying practices for poultry. The objective of this report is to bring together the principal findings of consumer poultry studies made in various sections of the northeast to date. Cities or areas where studies of this nature have been made include Portland, Providence, New York, Syracuse and other central New York cities, Trenton, Philadelphia, Baltimore, Wilmington and several urban areas of West Virginia.

Three general methods of studying consumer preferences and purchasing practices have been used by research workers in the northeast; (1) personal interviews with consumers, (2) observations of customer purchases in retail stores, and (3) controlled experiments to determine the effects of various merchandising and pricing practices on sales volume. The findings obtained directly from consumers by means of personal interviews are presented in the section "Consumers Make Their Poultry Buying Practices Known." Findings obtained by observing customer purchases of poultry in retail stores and from experimental tests are reported under "The Job of Retailing Poultry Meat." In the back of this report is a section entitled "Nature and Scope of Studies" which gives a brief description of each of the studies.

**CONSUMERS MAKE THEIR POULTRY BUYING
PRACTICES KNOWN**

During the 33 years prior to World War II, annual per capita consumption of poultry meat varied only slightly from the average of 21 pounds. Consumption increased substantially during the war and has remained high since, averaging 30 pounds per person in the United States from 1942 to 1952. In 1952 consumption of poultry meat per capita was at an all time high of 34 pounds.

² Assistant Agricultural Economist, Maine Agricultural Experiment Station.

To identify and appraise the factors affecting consumption of poultry, consumers in various sections of the northeast have been questioned regarding their preferences and purchases of poultry meat.

Poultry Meat is Third Choice

Although people are eating more poultry meat now than ever before, poultry is third choice in the meat line by most consumers. Housewives in Baltimore, Trenton and New York (9)³ were asked which type of meat they bought most frequently. Beef was the meat most frequently purchased. Pork ranked second, chicken third and lamb fourth. A high proportion of housewives of low income listed pork and chicken as their most frequent purchase. A higher per cent of high income people listed beef.

When asked why they did not buy more poultry meat, housewives gave several reasons. "Tired of Chicken" was the reason most frequently given by housewives for purchasing chicken less often than beef and pork. A number of them said that chicken was too high in price relative to other meats,⁴ or that chicken on display did not have a good appearance. A few housewives indicated that they did not like chicken, and some said that chicken was not always available at the market.

Beef was bought most frequently when serving guests. Chicken was a close second and pork ranked third. Choice of meat items for picnics were cold cuts, ham, chicken and hamburger in that order. When eating in restaurants the order of choice is generally beef, chicken and sea food.

Poultry Served Primarily on Sundays and Holidays

Several studies (2, 9) point out the fact that poultry meat is primarily a week end item. Consumers in Portland (2) purchased 78 per cent of their poultry meat on Friday and Saturday. Nearly 60 per cent of the poultry meat purchases were consumed on Sundays.

In Baltimore (9) 53 per cent of the housewives purchased chicken on Saturday and 30 per cent made their purchases on Friday. Low income people tended to shop more heavily on week ends and bought chicken more often on Saturday. Most housewives made a practice of serving chicken on Sunday rather than during the week days. Low income families served chicken on Sunday more often than high income families. In Trenton and New York purchases on these two days were about equal amounting to around 40 per cent each day.

³ Refers to bibliography at end of report.

⁴ Chicken is priced more favorably relative to other meats now (1954) than when the survey was made in 1950.

Stores the Main Sources of Poultry Meat

Consumers depend largely on retail stores for their poultry meat. Portland (2) housewives purchased 83 per cent of their poultry meat at retail grocery stores, 16 per cent direct from farmers and less than one per cent from wholesalers selling at retail.

In Baltimore, Trenton and New York (9) about two-thirds of the households purchased their meats at retail grocery stores, and one-third purchased from a meat market. A very small percentage of the housewives bought their meat from a peddler or farmer.

In Providence (12) 43 per cent of the housewives bought their chicken in grocery stores, and 31 per cent bought from poultry stores (mostly small live poultry markets). Farmers were reported as the source by 11 per cent, while 9 per cent indicated meat markets. The few remaining families bought from peddlers and from a variety of other sources.

High Income Families Use More Chicken

Among the many factors affecting poultry meat consumption, family income is one of the most important. Studies made (2, 7, 8), which have related consumption to income, confirm the belief that higher income families consume more poultry meat per person than do low income families.

In Baltimore and Trenton (8) per capita consumption of chicken was highest for families making \$6,000 or more a year, and for New York consumption was highest in families with incomes between \$4,000 and \$6,000. Income seemed to have more effect on the consumption of total meat than on the consumption of chicken.

Syracuse (7) families with high incomes purchased 50 per cent more meat than low income families. Poultry meat represented a higher per cent of total meat purchases as income status improved. The opposite was found in Baltimore, Trenton, and New York where poultry meat represented a higher proportion of total meat purchases in the lower income families.

In Portland (2), Providence (12), Baltimore, Trenton and New York (8) more high income families bought roasters than did those in the lower income groups. In West Virginia, however, more low income families indicated a preference for roasters than did high income families. In Providence (12) broilers and fryers were the most frequent classes of poultry purchased by about one-third of the families in each of the three income groups. Low income families in Portland (2) bought more fowl than did high income families.

In Providence (12), Baltimore, Trenton and New York (8) low income families bought more live poultry, while high-income families bought more eviscerated birds. Income appeared to have little effect on the per cent of chicken purchased as New York dressed and eviscerated, packaged cut-up and chicken parts. Stores located in high income areas of Wilmington (11) sold more ready-to-cook fryers while stores in low income areas sold more New York dressed birds.

Small Families Eat More Chicken

Several studies report per capita consumption of poultry meat higher in the smaller families. Baltimore, Trenton, and New York (8) families of less than three members consumed more meat and chicken per capita than larger families. Although large families consumed less meat and chicken than small families, chicken represented a larger part of their total meat consumption.

In the three cities (8) large families bought more large roasters than small families. No difference was found between large and small families in their purchase of fryers and small roasters. There is some evidence that larger families buy more live poultry than do small families. Large families buy less chicken parts and more New York dressed and eviscerated poultry than do small families.

Hebrew and Non-White Families Best Poultry Customers

Studies (2, 8) made in various sections of the northeast show that Hebrew and non-white families consume more poultry meat than do others. In Portland (2) Hebrew families used twice as much poultry meat as did Protestants and Catholics.

In Baltimore, Trenton, and New York (8) families of the white race consumed more meat than members of the non-white race. On the other hand non-white families consumed more chicken. Per capita consumption of chicken tends to be higher in non-white families. In West Virginia cities (4) the white families averaged 27 pounds per capita while the Negroes averaged 37 pounds per capita. Hebrew families consumed larger quantities of meat and chicken than Protestants, who in turn consumed larger quantities than Catholics. The fact that Catholics do not eat meat on Friday and special holidays may account for their lower per capita consumption of meat and chicken.

Non-white families bought more fryers and fewer roasters than the whites. Hebrews tended to buy heavier chickens than Protestants and Catholics. Protestants bought the highest percentage of dressed chicken. Catholics ranked second and Hebrews third.

Size of Bird Purchased Varies

The size of birds purchased by housewives varied somewhat from one area to another. In Baltimore (8) about two-thirds of the chicken purchased were fryers, one-half in Trenton, and slightly less than one-third in New York. The second most prominent size of bird was large roasters, the small roasters, and finally broilers in the three cities. New York housewives purchased a heavier bird than those in both Trenton and Baltimore.

Not only did purchases of different size birds vary among areas but also varied among housewives in a given area. No one size was purchased by a majority of West Virginia (4) housewives. The 2.5-pound fryer was chosen by 36 per cent of the housewives, 34 per cent chose the 2-pound bird and 20 per cent the 3-pound bird. It is interesting to note that purchases ranged from 1½ to 5 pounds for fryers.

In West Virginia (4) it was also found that purchases of different size birds were related to age of the consumer. More older people purchased stewers while younger housewives tended to purchase more fryers. Families with low incomes purchased more roasters and stewers, but fewer fryers.

Consumers Resist Frozen Poultry

Frozen poultry has not been readily accepted by housewives in the northeast, although there are signs that resistance is gradually lessening. In Baltimore, Trenton, and New York (9) more than 50 per cent of the housewives had never bought frozen chicken. More high income families had bought frozen chicken than had low income families. Those who had previously bought both fresh and frozen chicken indicated a strong preference for fresh over frozen. In West Virginia (4) only 3 per cent of the homemakers preferred frozen poultry over fresh.

Of the consumers interviewed in Providence (12), 79 per cent said they did not intend to increase their purchases of frozen chicken. Preferences for fresh or live chicken and a dislike of frozen chicken were the important reasons given for this decision. Convenience was the most important reason by the 16 per cent who planned to increase their purchases of frozen chicken.

Fleshing and Color Important to Housewives

West Virginia (4) housewives were asked--"If you are picking out a chicken yourself, what are the main things you look for that make you feel that it is a good chicken?" Plumpness and skin color were the answers most frequently given. Cleanliness and freshness were also

considered important by housewives. Of less importance were brand name, pin feathers, odor, moistness, color of feet and comb.

Wilmington (11) housewives were shown a portable exhibit of ten New York dressed fryers, one of which was grade A in all respects and each of the others were grade A except for some one quality defect. Housewives indicated they would purchase the birds in the following order if all were sold at the same price.

- | | |
|----------------------------|-------------------------------|
| 1. Grade A in all respects | 6. Grade A except poor finish |
| 2. " " except feed in crop | 7. " " except abrasions |
| 3. " " except broken bones | 8. " " except poor fleshing |
| 4. " " except skin tears | 9. " " except bruises |
| 5. " " except pin feathers | 10. " " except poor bleeding |

Housewives considered feed in crop, broken bones, skin tears, and pin feathers as relatively unimportant quality defects. On the other hand they considered poor finish, abrasions, poor fleshing, bruises and poor bleeding as serious quality defects.

Portland (2) housewives considered weight and appearance to be very important when buying poultry. Price was a relatively unimportant factor.

THE JOB OF RETAILING POULTRY MEAT

The job of retailing poultry meat is an extremely important and a highly complex link in the distribution chain. During recent years retailers have made tremendous advances in the direction of merchandising high quality poultry meat. A wider variety of poultry meat is available to consumers in our modern supermarkets of today than ever before in history. Poultry meat is being priced more favorably in relation to other meats than was true formerly. Despite the improvements made in merchandising poultry meat, in many cases retail food stores—even large supermarkets—are not maximizing their poultry sales.

By observing, recording and analyzing customer purchases of poultry meat in retail stores it is possible to learn something of consumer preferences and buying practices. In addition the practices retailers are following in merchandising poultry meat can often be studied. The following section brings together some of the principal findings from north-east regional studies of poultry merchandising in retail food stores.

Fryers Best Sellers

Fryers were the best sellers in the poultry line in supermarkets in Washington, Wilmington, Philadelphia, and Portland. In two stores located in suburban Washington, D. C. (10), fryer sales represented 90

per cent of the chicken sales in the two stores. Roasters and stewers accounted for 5 per cent each.

In four Portland supermarkets (6) fryers, sold either as cut-up whole birds or as parts, accounted for about one-half of the chicken sales. Fowl was the second best seller in the poultry line with turkey ranking third and roasting chicken fourth. Dollar-volume resulting from the sale of all poultry was 13 per cent higher in November than in May. Turkey sales in November were three times the May sales while fryer sales in November were less than half what they were in May. In May fryers accounted for over 60 per cent of all poultry sales, but in November fryers were only 26 per cent of total. Turkeys made up 18 per cent of total in May and 55 per cent in November.

Eviscerated Birds Outsell New York Dressed

A few years ago practically all poultry was sold as New York dressed with only small amounts of eviscerated poultry being sold. Now the situation is reversed. In the four Portland supermarkets (6) eviscerated poultry made up 90 per cent of the poultry purchases. The balance was purchased as New York dressed but was later drawn by store personnel.

The two Washington stores (10) had completely shifted from New York dressed and were selling 100 per cent eviscerated poultry.

In the eviscerated line cut-up, whole fryers are generally the most popular. An ever increasing volume of fryers is being sold as parts.

Retailers Find Resistance to Frozen Poultry

Although there are signs that resistance to frozen poultry is breaking down, consumers are still conscious of the fresh label when buying poultry. In the Washington (10) and Portland (6) stores, frozen poultry represented in most cases not over two per cent of all poultry purchases.

A high consumer preference for fresh chicken was also found in stores located in Philadelphia (3). Retailers in Philadelphia had several reasons for not handling frozen-packaged fryers. The most important reason given was "Frozen-packaged fryers higher price per pound than eviscerated birds." Frozen-packaged fryers also were higher priced per pound than fresh-eviscerated fryers. This was true despite the fact that frozen-packaged fryers were eviscerated, cut-up, and packaged at country plants where labor and building costs were cheaper than in metropolitan areas. Considerable saving is also effected by the elimination of transportation costs of viscera and other offal.

Other reasons given for not handling frozen-packaged fryers were

"Customers consider frozen-packaged fryers not fresh," and "Nationality and racial preference." Some customers associated frozen-packaged fryers with cold storage birds from the mid-west. "Volume of sales inadequate to justify cost of deep-freeze cabinets" and "Shortage of floor space" were not as important factors limiting a wider distribution of frozen-packaged poultry as commonly supposed.

Poultry a Week-End Item

Although supermarkets do a large share of their business on week ends, the sale of poultry is more concentrated toward the end of the week than most other items. In four Portland supermarkets (6), 64 per cent of the poultry sales occurred on Friday and Saturday. Thursday, with 20 per cent of weekly sales, was also an important poultry day. In the two Washington stores (10) about two-thirds of the chicken sales occurred on Friday and Saturday.

In Philadelphia (3) 95 to 98 per cent of the retailers sold fresh fryers on Friday and Saturday while only 70 per cent of them made sales on Thursday, 39 per cent on Wednesday, 28 per cent on Tuesday and 17 per cent on Monday.

In both Washington (10) and Portland (6) sales of chicken parts were more evenly distributed throughout the week than sales of other poultry items. With more poultry being purchased as parts it is possible that poultry will become more than a weekend item.

Competition From Other Meats

In the Philadelphia-Wilmington area (11) a certain amount of substitution was found to exist between fryer sales and pork loin sales. Fryer sales tended to form a pattern opposite that of pork loin. Variations in volume of fryer sales were associated with 38 per cent of the variations in pork loin sales.

Very little substitution was found between fryers and beef. Variations in volume of fryer sales were associated with only 1.2 per cent of the variations in beef sales. A direct relationship existed between the prices of these two items. Variations in the price of fryers were associated with 32 per cent of the variations in beef prices.

Approximately 63 per cent of the changes in weekly volume of fryer sales could be attributed to changes in prices of fryers, stewers, beef, pork loin, veal and lamb. A certain amount of substitution exists between fryers and a combination of stewers, pork loin, and lamb.

Follow-the-Leader Pricing Policy

In the two Washington stores (10) a follow-the-leader pricing policy was used. Fryers were used as price leaders; their price was usually lowered on Thursday for the week end and raised again on Monday. The price change was advertised in the Thursday evening edition of a local paper. The prices of poultry did not fluctuate in response to wholesale or farm price changes during the period.

Margins Vary

Retail mark-up on poultry varies with stores, with day of week, and with type of product. In the two Washington stores (10), two mark-ups were used on fryers; one was used on Monday, Tuesday and Wednesday, and the other was used on Thursday, Friday and Saturday. The percentage mark-up for the first three days averaged 18 per cent in one store and 23 per cent in the other store. On the last three days it was 9 per cent in one store and 15 per cent in the other store. The mark-up for roasters was 22 per cent in one store and 38 per cent in the other for the first part of the week. On week ends roasters were marked up 29 and 42 per cent. Mark-ups on stewers amounted to 24 per cent during the first part of the week and 30 per cent on week ends in one store. The other store kept the mark-up on stewers constant at 42 per cent during the entire week. The store with the larger mark-up was buying New York dressed roasters and stewers and drawing them in the store. The larger margin for New York dressed birds drawn in the store reflects the difference in price at the wholesale level between New York dressed and oven-ready birds.

When fryers were purchased as whole, eviscerated birds and sold as parts, returns resulted in a mark-up of 37 per cent per pound. Wings, necks, and backs were sold for less than cost.

Pricing Parts Presents a Problem

With more chicken being sold as parts, the pricing of parts has become a real problem in merchandising poultry meat. Studies in Maine (6) and Maryland (10) point out that retailers have a tendency to price chicken legs and breasts too low in relation to wings and backs. Consequently, the rate of turnover on legs and breasts is greater than it is for other parts. Stores were frequently short of legs and breasts while the necks and backs often went unsold.

There is reason to believe that the relative prices people are willing to pay for different chicken parts vary among areas. For example, necks and backs were found to be more in demand in certain areas of West Vir-

ginia than in sections of Maryland and Maine. In West Virginia (4) legs and breasts were the slower moving parts indicating they were overpriced relative to the faster moving necks and backs, wings, liver and giblets.

Poultry Frequently Not Available to Customers

In the four Portland supermarkets (6) a complete line of poultry meat was available to customers only about 60 per cent of the time. This resulted in lower volume poultry sales because many of the customers did their shopping when some kinds of poultry were not available. This difficulty arises in part from the method in which poultry meat is distributed to retail stores. Under present methods, many retailers find it necessary to purchase New York dressed or eviscerated whole birds, which must be either eviscerated, or if already eviscerated, cut-up and packaged before sold. If retailers were supplied with ready-to-sell poultry directly from a processing plant or warehouse in amounts and kinds which best suit their individual situations, the chances of stores running out of certain kinds of poultry would be materially reduced.

In a Morgantown, West Virginia, store (4) giblets were available only 30 per cent of the time while legs were available 96 per cent of the time. Backs, necks and wings were available about half the time.

Quality, Packaging and Advertising Boost Sales

Results of experimental tests conducted in central New York supermarkets (1) indicate that sales volume of fresh fryers can be increased by using the following practices: (1) offering cut-up, whole fryers and parts; (2) pre-packaging the cut-up, whole fryers; (3) adding an attractive, colored label to the package; and (4) displaying attractively packaged fryers in a refrigerated aisle display table. The above practices are listed in the order of magnitude that sales volume increased over a standard display of fresh eviscerated whole fryers.

It was further learned in this study that customers would select high-quality, eviscerated whole fryers at a ratio of more than 6 to 1 over standard quality whole fryers. In addition, volume was increased when high-quality fryers were offered at the same price as standard quality birds.

Point-of-sale advertising in itself, or in conjunction with window advertising, materially increased sales of fresh whole fryers. Window advertising alone had very little effect on sales volume.

By offering fresh whole fryers for sale at 10 and 20 per cent above and 10 and 20 per cent below a standard competitive price, in addition to a standard price it was determined that the price elasticity of demand for fresh fryers was relatively elastic in the short run.

NATURE AND SCOPE OF STUDIES

Harold Smith (8, 9) interviewed 1,156 housewives in Baltimore, Trenton, and Queens Borough, New York, in order to explain consumer purchases and consumer demand for chicken. Emphasis was placed on chicken consumption and its relationship to total meat consumption. Housewives were asked to indicate their purchases of various sizes of birds, for various types of pack, and for live and dressed chicken. Special attention was given to the factors of consumer income, religion, race, and size of family all of which may have a bearing on consumption. The stratified random method was used in selecting the sample blocks. Dwelling units within sample blocks were selected at random.

In Portland, Maine, Lebrun (2) interviewed 597 housewives to learn something about their buying practices with regard to poultry meat and how these buying practices were related to family income, race, religion and size of family. At the same time 90 retail stores in the Portland area were contacted to determine the extent to which retailers were providing consumers with the kind of poultry preferred.

In 1952 Nybrotten (4, 5) interviewed 2,126 randomly selected homemakers in 13 different urban areas of West Virginia to learn their preferences and purchasing practices for poultry meat. In 1953 one of the areas (Parkersburg) was chosen to study bias in responses to questions postulating values to use as standards for responses. In this second survey 307 homemakers (163 randomly selected from the city and 144 selected on the basis of store patronage) were interviewed with a short questionnaire. In these surveys homemakers gave their opinions on what made chicken look good, their favorite way of cooking chicken, weights preferred for different uses, parts preferred by members of the household, opinions on some retail practices, and ratings of different parts of chicken assuming postulated prices for pork and beef. Family income, net worth, income-area of dwelling, age and education of individuals, religion, race, food bill and other factors for socio-economic stratification were learned.

Raymond Smith (11) determined the relative importance consumers attach to various quality defects in poultry. Wilmington housewives were shown a portable exhibit of ten New York dressed fryers. One fryer was grade A in all respects and each of the others was grade A except for some one quality defect. Housewives were asked to indicate the order in which they would purchase the birds if all were sold at the same price.

Taylor and Owens (12), in connection with a study of consumer buying habits and preferences for egg quality, obtained answers to questions relating to buying habits and preference patterns for poultry meat.

Information on purchases and preferences was secured from a sample of 605 Providence housewives.

McAllister and Bausman (3) interviewed 706 store managers in Philadelphia to obtain the facts behind present day methods of marketing fryers, and to investigate the possibilities of increasing sales and developing more market outlets. The size of stores, the level of income of customers, their race, nationality, and eating habits were considered in selecting the sample stores.

Harold Smith and Dallavalle (10) did a case study of poultry and egg merchandising in two stores located in suburban Washington, D. C. One store was a member of an independently owned chain while the other was an independently owned individual store. An enumerator was in each store for the entire period of the study. Daily records were kept in one store from July 9 to August 31, 1951, and in the other from August 9 to September 15, 1951. Observations were made and records kept on cutting, displaying and wrapping of chicken. Daily volume of sales was recorded by taking an opening and closing inventory each day. The opening inventory, plus the quantities of all poultry put on display during the day, less the closing inventory, gave an accurate sales volume figure for the various types of pack.

The case study method was also used in studying poultry and egg merchandising in four supermarkets located in Portland, Maine. The purpose of this study carried on by Savage and reported by Saunders (6) was to describe the practices retailers are using in merchandising poultry products with a view toward recommending new and improved methods which would be in the best interests of producers and consumers. The four supermarkets used in the study were relatively large stores and belonged to two different national chains. Receipts and customer purchases of poultry meat and eggs were observed and recorded daily by enumerators assigned to the stores. The work was conducted over a two-month period, May and June, 1952. One month was spent in each of two stores. Daily records of customers' purchases of poultry by class, style of processing, and type of pack provided an indication of consumer preference. To learn something of the seasonal pattern of customers' poultry purchases, the study was repeated during November in the same supermarkets.

Two large retail chain firms in the Philadelphia-Wilmington area furnished Raymond Smith (11) with data on volume of sales and prices for poultry and red meats for the calendar year 1951. To determine the factors which affect consumer purchases of frying chickens, Smith correlated volume of sales and prices of fryers with sales and prices of other

meats. Weekly comparisons of farm, wholesale, and retail fryer prices were made.

During a 7-week period Nybrotten (4) observed the sales of different chicken parts in a West Virginia store, receiving whole fryers and cutting them up in the store. The purpose was to learn the relative sales volume of chicken parts under the prevailing price relationships among the parts. Price relationships changed only slightly during the period studied even though no attempt was made to control prices. By taking inventories in the display, sales of each part were recorded while any part was in competition with any other part. Inventory of all parts was taken the instant that the supply of any one part was exhausted in the display.

Jasper (1) determined the effects of various merchandising and pricing practices on volume of fresh fryer sales in the fall of 1953. The experiments were conducted in supermarkets with service-type meat departments each of which was located in the business district of a different city in the central New York area. In five supermarkets, four-by-four latin square experimental designs were used in testing the effects of different merchandising variables on volume of fresh fryer sales. Five-by-five latin squares were used in a sixth experiment to test price effects. Each experiment was repeated twice. Eviscerated, fresh, whole fryers were used as the standard treatment in all experiments. Sales from the various treatments, in each experiment, were compared to sales from the standard treatment. Sales were expressed in terms of pounds of fresh fryers sold per 100 customer units.

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