FAMILY ECONOMICS REVIEW

HIGHLIGHTS/SPRING 1976

THE FARM FAMILY LIVING SURVEY

CANNING AND FREEZING

HOW HOUSEHOLDS USE ENERGY

THE IMPACT OF INFLATION

ARS-NE-36
Consumer and Food Economics Institute
Agricultural Research Service
U.S. DEPARTMENT OF AGRICULTURE

FAMILY ECONOMICS REVIEW is a quarterly report on research of the Consumer and Food Economics Institute and on information from other sources relating to economic aspects of family living. It is prepared primarily for home economics agents and home economics specialists of the Cooperative Extension Service.

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FAMILY EXPENDITURES: THE FARM FAMILY LIVING SURVEY[1]

by Fred C. Thorp
Statistical Reporting Service

During 1973 and early 1974, the Statistical Reporting Service of the U.S. Department of Agriculture conducted a comprehensive survey to determine living expenditures for farm operators' families. Data were collected from 2,600 families by personal interviews.

Expenditures in 1973

The survey results indicate farm families in the United States spent an average of $9,317 in 1973, or a total of $27 billion. The family income from farm and nonfarm sources, before taxes, averaged $12,371 and after taxes, $10,965. Net farm income rose to $33 billion in 1973 from $18 billion in 1972, so expenditures in 1973 may have been somewhat atypical. However, the expenditure patterns follow earlier survey findings.

Housing, food, and clothing usually referred to as the basic categories accounted for 57.4 percent of the total expenditures.

Housing, including shelter, household operations, furnishings, equipment, and utilities took the largest amount—$2,671 per family or 28.7 percent, of the total expenditure. Of each dollar spent for housing, about one-half was for shelter, one-fourth for furnishings and equipment, and one-fourth for the operation of the household. This breakdown is fairly consistent for all economic groups.

Food, excluding the value of products consumed on farms where grown, but including nonalcoholic beverages, meals eaten away from home, and food stamps was second with 21.6 percent of the total, or an average of $2,021. Food stamps accounted for $7.24, or about 0.1 percent of the average family expenditure. About 82 cents of the food dollar expenditure went for food and nonalcoholic beverages used at home. Food consumed away from home accounted for roughly 18 cents. The percentage of the food dollar used for food away from home tended to decrease as income decreased. The survey did not ask highly detailed questions on food purchases; nor were families asked to keep a diary. The questions asked for usual amounts spent per week or per month.

Transportation constituted the third largest component of family spending. The purchase, operation, and maintenance of motor vehicles took 17.6 percent for an average of $1,639. Almost one-half was for the purchase of motor vehicles. The transportation dollar breaks down into an average of 46 cents for the purchase of motor vehicles, 40 cents for operating expenses, 12 cents for maintenance and repair, and 2 cents for other travel and transportation. Higher income families spent more of their dollar on the purchase of vehicles and less on operating expenses, the reverse being true for lower income families. Maintenance and repair took roughly 12 cents of the transportation dollar for all income classes.

Clothing expenditures were a distant fourth in importance with 7.0 percent of the total, or an average of $648 per family. The share of the clothing dollar averaged 34 cents for purchases for females ages 16 and over; 10 cents for girls 2 to 15 years of age; 31 cents for males 16 and over; 10 cents for boys 2 to 15 years of age; 2 cents for children under 2 years; and 13 cents for materials and services which were not identified with individual family members. This allocation of the clothing expenditure was generally true for all income classes.

Medical care cost each family an average of $624 and accounted for 6.7 percent of total expenditures. Health insurance premiums made up 38 cents of the dollar spent for medical care. The percent of the dollar decreased as income decreased, going from 42 down to 31 percent. However, this does not necessarily mean that the lower income families have less protection, since more of them have off-farm jobs that include health benefits.

Gifts and contributions made up 3.9 percent of the total, followed by personal insurance with 3.4 percent. About 2.3 percent of the family expenditure was for personal care. Recreation, reading, education, tobacco, alcoholic beverages, and other expenditures

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[1] This article is condensed from a paper given at the National Agricultural Outlook Conference in November 1975. The complete paper may be ordered from the Consumer and Food Economics Institute (see page 2 of cover for address).

accounted for the remaining 8.7 percent. Of these items, education, with 1.7 percent or an average of $160, was the largest, followed closely by recreation and reading with 1.5 percent, or an average of $140.

Changes in Spending Patterns Between 1955 and 1973

The last comparable expenditure survey conducted by the Department of Agriculture (USDA) was in 1955 and included 3,845 respondents. Rural farm family expenditure data are available for 1961 as a part of the Bureau of Labor Statistics (BLS) nationwide survey of consumer expenditures. These data, however, are not directly comparable with the 1955 and 1973 surveys because of some differences in concepts and collection procedures.

The farm family averaged 3.5 persons in 1973, down from 3.8 in 1955. The average age of farm operators (head of household) in the 1973 survey was 50.4 years, compared with 49.6 years in 1955. Total expenditures for family living in 1973 were more than $9,300. This is nearly triple the average expenditure of $3,300 in 1955. When the change in price level is taken into account, real consumption was up about 70 percent. In 1973, U.S. farm families were using a smaller proportion of their total expenditures on food, clothing, medical care, tobacco, and alcoholic beverages than in 1955. A greater proportion of the family expenditures was used for transportation, education, personal insurance, gifts, and contributions.

Housing was the largest expenditure grouping for farm families in both 1955 and 1973, accounting for 28.1 percent of total expenditures in 1955 and 28.7 percent in 1973. Compared with 1955, a greater proportion of the 1973 housing dollar was used for shelter and less for furnishings and equipment and household operations. In 1973 about 47 percent of the housing dollar was for shelter compared with 38 percent in 1955. Expenditures for food and beverages predictably decreased in importance from 25.2 to 21.7 percent. Traditionally, food responds less than other categories to increases in family income. The largest percentage increase between the 2 years occurred in automobile expenditures. These rose from 11.0 to 17.2 percent of total expenditures. Auto sales were a record high in 1973 and farm families were using a significant portion of their income for auto and truck purchases. Respondents were asked to report motor vehicle purchases for 1970 through 1973. The family share (excluding costs charged to the farm as production expenses) of all motor vehicle purchases averaged $298 for 1970, $433 for 1971, $691 for 1972, and $756 for 1973. Expressed as a percent of operator's realized net farm income, the purchases would represent 7, 12, 14, and 10 percent for those four years. This shows a substantial upgrading of transportation in 1971, 1972, and 1973. Clothing expenditures declined sharply as a proportion of total spending, from 13.0 to 7.0 percent. Also, tobacco and alcoholic beverages took a sharply smaller proportion of spending in 1973 than in 1955. Expenditures for education and personal insurance were up substantially in 1973. About the same percentage of total expenditure was used for recreation and reading and personal care in 1973 as in 1955.

Spending Patterns Related to Farm Product Sales

Survey data have been summarized by economic class of farms based on income from sales of agricultural products. Below are the sales classes and percent of farm families in each group.

Farm product sales	*Percent*
Stratum 1 - $40,000 or more	18.9
Stratum 2 - $20,000 to $39,999	14.5
Stratum 3 - $5,000 to $19,999	24.8
Stratum 4 - $1,000 to $4,999	25.7
Stratum 5 - Less than $1,000	16.1

On average, off-farm income made up over one-half of the money income before taxes for all farm families. For Stratum 1 farms, it averaged about 25 percent of total income and climbed to over 90 percent for Strata 4 and 5. Money income before taxes was $21,700 for Stratum 1 farms, then dropped to $12,400 for Stratum 2. Stratum 3 farms averaged $10,300, Stratum 4, $9,500, and Stratum 5, $9,000.

The housing category was the largest expenditure for all strata farms and accounted for 28 to 30 percent of the family budget. In this category, the average expenditure for shelter ranged from $1,824 per year for Stratum 1 farms downward to $941 for the Stratum 4. Family spending for furnishings and equipment ranged from $1,117 for Stratum 1 to $507 for Stratum 5. Household operation costs were between $675 to $700 for Strata 3 to 5, $757 for Stratum 2, and $852 for Stratum 1.

Food ranked second in overall importance, with expenditures taking a greater proportion of the total as the income levels dropped. Food accounted for 18.6 percent of the total for Stratum 1 farm families and 24.6 percent in Stratum 5. Actual expenditures ranged from $2,526 for Stratum 1 to a low of $1,776 for Stratum 4.

Transportation made up about 16 percent of total expenditures for Strata 1 and 2 farms, 17 percent for Stratum 3, and over 19 percent for Statum 5. Expenditures for purchases of motor vehicles for Stratum 1 averaged $1,189, more than 1½ times the outlay for Stratum 2. The expenditures for farms in Strata 3 through 5 were between $600 and $650. Strata 1 and 2 spent the most on vehicle maintenance and repair, at $241 and $205, respectively. The remaining groups spent an average of $175 to $180. Operating expenses averaged $740 for the larger farms then dropped to $615 to $635 for Strata 2, 3, and 4, but went up to $685 for Stratum 5. This probably reflects more driving to off-farm jobs.

Clothing expenditures as a percent of total expenditures for family living ranged from 6.5 to 7.4 percent for various strata. The dollar expenditure for Stratum 1 was nearly $1,000, then dropped to $707 for the next stratum, and averaged $602, $493, and $504 for the next three respective groups. This same pattern held for purchases of men's, women's, and children's clothes.

Medical care required 6 to 7 percent of the family budget. Annual expenditures followed income, amounting to $885 for farms with the upper incomes to $472 for farms with the least income.

Personal care also followed income, accounting for 2 to 2.5 percent of total family living expenditures. Tobacco and alcoholic beverages made up about 1 percent of the total expenditure for each strata. Recreation and reading, education, personal insurance, and cash gifts and contributions outlays all decreased as income decreased, both in terms of dollars and as a percent of total expenditures.

Percent of Families Reporting Selected Expenditures

The survey data indicated that about 80 percent of the farm-operator families owned the dwelling they occupied. This is based on 81 percent of the respondents reporting property taxes paid on owner occupied dwellings. Cash spent for living quarters was reported by 12 percent of the families. The remaining families had other arrangements for housing, such as house included with farmland rent, living with parents, or living in a rent-free dwelling.

Health insurance premiums were paid by 72 percent of the families. By farm income groups, the percent reporting were 83, 79, 70, 71, and 60, respectively, for Strata 1 through 5. Hospital expenses were reported by about one-fourth of the families, with the percentage ranging from 22 for the lower income group to 27 percent for the upper income farms.

During 1973, nearly 30 percent of the families purchased one or more autos to be used for the family. Surprisingly, this was only slightly above 1972. The big increase of families purchasing autos occurred between 1971 and 1972, when the percent purchasing jumped from 18 to 29 percent.

In the home-furnishing line, 16 percent purchased bedroom furniture, 11 percent outdoor patio furniture, 11 percent color TV sets, 8 percent dining room furniture, 5 percent kitchen furniture, and 2 percent pianos or organs. Clothes washers were the most frequently purchased major appliance with 10 percent of the families purchasing them in 1973. Percent of families purchasing other major appliances were: Cook stoves 9 percent, refrigerators 9 percent, homefreezers 7 percent, clothes dryers 6 percent, sewing machines 5 percent, dishwashers 4 percent. Purchases of one or more small electrical kitchen appliances were made by 37 percent of the farm families. Twenty percent purchased electrical personal care equipment. Photographic equipment purchases were made by 9 percent of the respondents and 7 percent reported buying stereo sets or components.

Source for Additional Data

Survey results of the 1973 farm family expenditure survey are published in a Statistical Reporting Service publication titled, "Farm-Operator Family Living Expenditures for 1973," Sp Sy 6 (9-75). Copies may be obtained from the Crop Reporting Board, Statistical Reporting Service, USDA, Washington, D.C. 20250.

RECENT CHANGES IN AMERICAN FAMILIES

Marriage rates were lower and divorce rates were higher in August 1974 than in August 1973. Other recent changes in family lifestyles include more delay in marriage, changes in divorce patterns among social levels, and a decrease in household size. This information is contained in "Recent Changes in American Families," the first in a new series of occasional reports prepared by the Population Division, Bureau of the Census. These reports, published in Series P-23 of Current Population Reports, will include broad speculative analysis and illustrative hypotheses as an aid in understanding population statistics and in assessing their potential impact on public policy. (U.S. Department of Commerce, Bureau of the Census, Population Division, Washington, D.C. 20233.)

CANNING AND FREEZING—WHAT IS THE PAYOFF?[1]

by Evelyn H. Johnson, Extension Service

The science of nourishment is both intellectual and practical. The practical aspect was brought forcibly to our attention in recent months as some 30 million Americans rushed out to beat inflation with a garden hoe and a jar lid. These gardeners have produced some prize-winning blisters and aches. They have reached a low level of despair with the elusiveness of canning lids, the fickleness of jelly that didn't jell, pickles that didn't pickle, and tomatoes that didn't pH properly. Many gardeners, though, have found an unsuspected green thumb. They exposed friends and family to fresh-from-the-garden produce and take-home presents. They have freezers and shelves well stocked with containers of home-preserved fruits and vegetables.

Home food preservation saves money. Or does it? There are many hidden costs that must be considered in home canning and freezing of foods—costs of produce, equipment, heat and energy consumption, and interest on large cash outlays such as a freezer. Furthermore, there is a considerable time expenditure. If you have marketable skills, your time might be more profitably spent earning dollars instead of gardening or preserving food.

Cost of Produce for Canning and Freezing

Produce used in home canning and freezing may come from several sources—home gardens, roadside markets, Pick-your-own fields, or gifts from friends—and the price will vary accordingly. In July 1975, in Ithaca, N.Y., 1 bushel of green peas cost $6 from a roadside stand, $3 in a pick-your-own field, and $1.17 plus a share of fixed costs from a home garden.[2] Before you rush out to plant a garden, however, consider the potential costs: Tilling the soil, fertilizer, garden tools, pesticides, and water. Remember that even experienced gardeners suffer some crop failures as well as bountiful harvests!

In 1973, Barbara Bridges, a student at the University of Maine, did a research project entitled "Home Vegetable Gardening -From

[1] This article is condensed from a paper given at the National Agricultural Outlook Conference in November 1975. The complete paper may be ordered from the Consumer and Food Economics Institute (see page 2 of cover for address).

[2] Klippstein, R. B., and Wallace, E. *Actual Costs of Home Food Preservation*. Division of Nutritional Sciences, Coop. Ext. Serv., Cornell Univ. 1975.

Seed to Table." The results of this theoretical study indicated expenses of $92.64 for harvesting 1,409 pounds of fresh vegetables from a 4,800-square-foot plot. The total value of the vegetables was estimated (using local chainstore prices) at $521.11, a profit of approximately $430. Add $189 for labor to the expense column and the garden will still return about $240. Multiplied by several years of gardening, or by the local population of gardeners, the result is impressive.

A 30- by 30-foot plot planted by Julian A. Wesley, an Extension agent, Milwaukee County, Wis., produced vegetables valued at $179.53 for a cash outlay of $27.45 for seeds, plot rental, fertisizer, and tools. Wesley estimated that about 75 man-hours of labor at $2 per hour would wipe out most profits. He suggests that vegetable growing be considered as recreation.

In addition to the cash a family need not spend at the supermarket, a gardener gains through healthy outdoor exercise, opportunities for family activities, and across-the-fence neighborliness. Perhaps, the decreased time spent in shopping for fresh produce is an asset for some families. Certainly all in the family welcome the fresh-from-the-garden taste when dinner is served.

Cost of Home Freezing and Storage of Food

Your garden is setting a production record. Your favorite supermarket has a special on locally grown green beans. Should you freeze or not? Marcile Allen, Extension specialist in nutrition at Purdue University, thinks, "Freezing may be the answer—if you have freezer space. It can be the key to varied family meals, an easy and excellent way to preserve many of today's surpluses for tomorrow. But selecting a freezer to fit your needs and filling that freezer with high quality food takes time, energy, money, and know-how."

The two main advantages of freezing are that (1) the procedure is simple to do and (2) freezing will keep foods closer to fresh than any other method of preservation. The main disadvantages are the costs of purchase and operation of the freezer.

Studies recently made by Extension nutritionists in the Division of Nutritional Sciences at Cornell University indicated that food frozen at home costs almost 19 cents per pound more than that purchased and consumed as needed, even when using an energy-efficient freezer to full capacity in an area where electric rates are relatively low (see footnote 2). High electric rates, poorly operating freezers, or inefficient use of freezer space or materials will add to the cost, in some cases as much as 53 cents per pound of food.

There are fixed and variable costs associated with owning and using a freezer. Fixed annual overhead costs include the cost of the freezer amortized over the number of years the freezer is expected to be used, interest foregone on the money used to purchase the freezer, an annual repair allowance, and the cost of electricity to maintain the freezer temperature at 0° F. Variable costs include the cost of electricity to freeze food and lower its temperature to 0° F, and the cost of packaging, water, and fuel to prepare foods for freezing. These costs vary with the amount of food frozen.

To calculate the annual overhead cost of any freezer, divide the total cost of the freezer, including finance charges, taxes, delivery, and installation, by the length of time[3] you expect to keep the appliance. Add 5 to 6 percent of the cost of the freezer to account for interest that could have been earned if the money had been put to some other use, and 2 percent of the purchase price as an allowance for repairs.

The electrical energy required to maintain 0° F in a home freezer varies, depending upon the size and type of freezer. You may pay heavily for the convenience of frostless freezers. A 15-cubic-foot conventional freezer, with an average wattage of 341, that uses approximately 1,165 kilowatt-hours (kWh) per year will cost $46.60 in electrical energy (assumes a cost of 4 cents per kWh). By comparison, a frostless freezer of the same size, with an average wattage of 440, using 1,761 kWh per year, cost $70.44 to operate. The size of the freezer makes a difference also. Assuming a cost of 4 cents per kWh, a 6-cubic-foot freezer may cost $26.28 per year to operate; a

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[3] The average service-life expectancy of a new freezer has been estimated by USDA to be 20 years; 9 years for a used freezer. This is the number of years, on the average, families actually keep freezers, not how long they can be made to last. Many factors influence the decision to replace or dispose of an appliance. See the Summer 1975 issue of *Family Economics Review* for a discussion of the service-life expectancy of appliances.

12-cubic-foot freezer, $43.80; and an 18-cubic-foot freezer, $52.56.[4]

The table below shows annual overhead costs for owning and operating a 15-cubic-foot freezer which cost $300, plus $41 for sales tax and delivery charge (see footnote 2 for source).

Item	Cost
	Dollars
Amortization ($341. divided by the 20-year expected life)	17.05
Interest foregone ($341. at 6 percent)	20.46
Annual repair allowance (at 2 percent of $300.)	6.00
Electricity to maintain 0° F	36.75 to 204.12
Total overhead	80.26 to 247.63

In addition to the overhead costs that are incurred simply by owning a freezer that is plugged in, there are additional costs associated with the amount of use the freezer gets. It takes about 0.1 kWh to freeze a pound of food and lower its temperature to 0° F. The annual cost of electricity for freezing food will depend on the freezer, the total number of pounds frozen, and the local cost of electricity.

The cost of packaging including reusable containers is about 2 to 6 cents per pound. Aluminum foil costs more; rigid containers, amortized over several years, may cost less. The cost of packaging to freeze 1 pound of food is:

Packaging material	Size	Price (Cents)
Heat-sealable pouch	6½ in X 8 in	6.4-6.7
Bag with twist tie	1 pt	1.2-2.0[1]
Plastic carton	1 pt	19.0-38.0[2]
Glass jar	1 pt	21.0-22.0[2]
Plastic freezer wrap	1½ sq ft	1.2-10.5
Coated freezer paper	1½ sq ft	1.8-4.5
Heavy duty aluminum foil	1½ sq ft	5.2

[1] This cost does not include the cost of cover boxes which shape the filled bags into uniform sizes for compact storage and prevent tears in the bags. The cost of the pint-sized cover box is about 2 to 4 cents and can be used many times.

[2] Reusable.

[4] Adapted from Van Zante, H. J. *Household Equipment Principles*. Englewood Cliffs, N.J.: Prentice-Hall. Examples given for kWh per year are illustrative only and do not represent an average for all models or the energy usage of any particular models. In addition to differences due to the self-defrost feature and size, energy costs will vary with the amount and type of insulation, whether the freezer is an upright or chest type, and other design features.

The cost of water and fuel used in washing, blanching, and chilling foods is estimated at 0.004 cent or slightly less than a half cent per pound of food.

Table 1 estimates the range of fixed and variable costs of freezer operation in a 15-cubic-foot freezer. Table 2 estimates the cost of operating a 12-cubic-foot freezer filled to capacity 1 time during a year, 1½ times, and 2½ times. The amortization was figured over 20 years in table 1 and 15 years in table 2, the interest rate was 6 percent in table 1 and 3 percent in table 2, and packaging was 5 cents per pound in table 1 and 3 cents in table 2. Note the increase in costs for electricity and packaging as more food is frozen, but the reduced total cost per pound.

To save money by home freezing foods, a family would need to select a freezer to fit family needs, use it properly, freeze only those foods the family likes to eat and in amounts they can enjoy, and find economical sources of those foods. Just storing food in a freezer may raise the price by 20 cents per pound over a year's time. Opening the doors or keeping the freezer in a warm place will increase the electrical costs. Excessive or wasteful use of packaging materials is costly also (see footnote 2).

Costs of Home Canning

Canning is probably the most economical and practical method of preserving food in the home. The canning operation varies tremendously from household to household—as to what foods are canned, how they are processed, the kinds of containers and equipment, and the amount canned at a given time. Some families combine their canning activities and share the results. Most home canners grow their food; others purchase it at farm markets or harvest fields. These factors, as well as the costs of labor, energy, water, and ingredients added during the canning process, determine the total cost of home canning. Inconsistency of these factors from household to household and community to community makes it impossible to derive a cost (per pound of home-canned food) that applies to *all* household situations. Information can be provided to help the home canner figure fairly accurately the costs of canning various foods in a given household situation.

The cost of produce may be the major expense in canning if the produce is purchased

Table 1. Annual cost of freezing and storing food in a 15-cubic-foot freezer

Expense	Pounds of food stored: 525	Pounds of food stored: 1,312
	Dollars	*Dollars*
Overhead (fixed costs)....	80.26 to 247.63	80.26 to 247.63
Cost to store prepackaged, frozen food (overhead divided by the number of pounds stored)........	.15 to .47	.06 to .18
Packaging (at 0.05 per pound	26.25	65.60
Electricity to freeze food (at 0.1 kWh per pound, ranging from 0.03 to 0.09 per kWh)....	1.58 to 4.73	3.94 to 11.81
Total annual cost	108.09 to 278.61	149.80 to 325.04
Total cost per pound to package, freeze, and store food	.20 to .53	.11 to .25

Source: Klippstein, R. B., and Wallace, E. *Actual Costs of Home Food Preservation.* Division of Nutritional Sciences, Coop. Ext. Serv., Cornell Univ. 1975.

at local food markets. Growing your own produce or buying it directly from the farm and orchard, may give you good quality produce at less cost during the height of the season. Consider, also, the cost of added ingredients—sugar, vinegar, spices, pectin, and salt. (Figure the cost of sugar by allowing 2¼ cups per pound.)

The most expensive piece of equipment for home canning is a pressure canner, ranging in price from $40 to $75 for models commonly used. Smaller models priced from $20 to $35 may be more practical for the small family or inexperienced canner who doesn't plan to can large quantities of food. The initial cost of the pressure canner can be amortized over an anticipated 15- to 20-year life expectancy. Add 2 percent of the purchase price to cover the cost of repairs per year—gasket and pressure control safety valve. (There should not be a need for repairs for several years after the purchase of a new canner.) A large water bath canner is needed for processing fruits, tomatoes, pickles, and preserves. One can be purchased for $6. A jar lifter for about $2 to $3, a funnel, and a canning book are all that is needed to turn the home kitchen into a small cannery. New canning jar units range in price from about $2.29 to $3.49. The price of glass jars can be amortized over a 10-year average life span. Canning lids vary widely in price, from 1.5 to 5 cents per lid. Rings are about 1 cent, amortized over 10 years.

The cost of electrical energy required for processing can be determined if the electrical input of each range surface unit being used, time at each heat setting, and local fuel costs are known. The amount of gas used can be determined only if a monitoring meter is used. Water for washing produce and steam for blanching can be estimated at a cost of 0.4

Table 2. Cost of operating a 12-cubic-foot freezer

Item	Filled to capacity--		
	1 time (360 lb)	1½ times (540 lb)	2½ times (900 lb)
	Dollars		
Net depreciation, based on 15-yr usage, cost of $250 when new	16.39	16.39	16.39
Return on investment foregone at 3%	11.26	11.26	11.26
Repairs (2% of purchase price)	5.00	5.00	6.00
Electricity for freezing food at 4¢ per kWh	1.44	2.16	3.60
Electricity for maintaining 0° F 1,100 kWh at 4¢ per kWh	44.00	44.00	44.00
Packaging, average 3¢ per pound	10.80	16.20	27.00
Total cost per year	88.89	95.01	107.25
Cost per pound	0.24	0.17	0.12

Source: Barton, J. A., Extension Specialist Foods and Nutrition, VPI and Virginia State Univ., 1975.

cents or about one-half cent per pound of food canned.

The table below gives an estimated cost for canning 280 quarts of food. Note that neither the cost of food nor the cost of labor is included.

Item	Cost
	Dollars
Pressure canner (amortized over 20 yr)	3.25
Repairs	.75
Water-bath canner (amortized)	.60
Small equipment	.50
Jars and lids (amortized over 10 yr)	12.00 to 16.00
Water and steam	5.00
Electricity for processing at 4.5¢ per kWh:	
140-qt pressure canner	1.30
140-qt water-bath canner	2.00
Total	25.40 to 29.40
Per quart	.09

Recent studies at Cornell University (see footnote 2) indicated that the cost for canning a quart of tomatoes at home ranged from 4.3 cents, if jars were on hand and the tomatoes were free of cost, to almost 51 cents if both jars and tomatoes were bought. They estimated the range in cost for home canning green beans as 4 cents a quart to 63 cents a quart, and the cost for a quart of peaches in syrup from 20.5 cents to 90.5 cents. Their cost analysis for canning the three foods is shown in table 3. Note that the *total cost per quart* does not include cost of time spent and equipment used. Cost of equipment would add one-fourth to one-half cent per quart to the total cost as given. Total cost per quart could be reduced through greater yield per bushel by careful shopping or home gardening.

Theodore Wishnetsky and Jerry Cash, Cooperative Extension Service, Michigan State University, state that the main reasons for the lack of previously published information on home food preservation costs is the inherent uncertainty involved in deciding the bases for calculating many of the cost factors. They

Table 3. Cost analysis of home canning–June 1975
(Cost per quart)

Cost of jar units or lids		Cost of produce[1]		Cost of additional ingredients	Cost of processing (electricity)	Total cost per quart (using electricity)
Jars	Lids	Gift	Buy			
Peaches (1 bushel at $9.25 yielded 20 quarts)						
On hand: 0.0¢	4.6¢ (at 55¢/doz)	0.0¢	46.3¢	Sugar: 15¢	0.9¢	20.5¢ to 66.8¢
Purchased: 28.3¢ (at $3.39/doz includes lids)	0.0¢	0.0¢	46.3¢	Sugar: 15¢	0.9¢	44.2¢ to 90.5¢
Tomatoes (1 bushel at $4.25 yielded 17 quarts)						
On hand: 0.0¢	3.3¢ (at 39¢/doz)	0.0¢	25.0¢	--	1.0¢	4.3¢ to 29.3¢
Purchased: 24.9¢ (at $2.99/doz includes lids)	0.0¢	0.0¢	25.0	--	1.0¢	25.9¢ to 50.9¢
Green beans (1 bushel at $6.00 yielded 16 quarts)						
On hand: 0.0¢	3.3¢ (at 39¢/doz)	0.0¢	37.5¢	--	0.6¢	3.9¢ to 41.4¢
Purchased: 24.9¢ (at $2.99/doz includes lids)	0.0¢	0.0¢	37.5¢	--	0.6¢	25.5¢ to 63.0¢

[1] Cost in Ithaca, N.Y., 1974 growing season.

Source: Klippstein, R. B., and Wallace, E. *Actual Costs of Home Food Preservation*. Division of Nutritional Sciences, Coop. Ext. Serv., Cornell Univ. 1975.

agree that capital costs (tools for gardening and equipment for canning) will not apply to some home gardeners and canners, will apply in part to others, and will apply in full to still others. They have computed cost totals, therefore, for each of two products, green beans and tomatoes. The total cost per quart for canning green beans, in the summer of 1975 was $1.21 when total capital costs were assigned to the first year's canning operation, $0.42 when the capital costs were amortized over 20 years, and $0.37 if there were no capital costs. The corresponding costs for canning tomatoes were $0.74, $0.22, and $0.19.

Wishnetsky and Cash believe that the true cost lies somewhere between the upper and lower values. They base their data on the arbitrary assumption that a typical family puts up 180 quarts of food per season. They point out that not all harvested produce will be usable. Food lost through spoilage or given away cannot be ignored as an additional cost factor that raises the net cost per bushel for the home gardener. They suggest there should be no problem in making corrections to compensate for local prices or for variations in yield, where they are known to exist. Corrections for variations in total jars canned per season can also be made without difficulty. They conclude:

> "Superior quality (compared to commercially-canned) that is attainable for some home gardeners and home canners is an intangible that the researchers made no attempt to quantify. Likewise, the cost of labor was ignored. If it were to be included at the typical manual labor rate, there would be little likelihood for any cost saving for any home-gardening/home-canning operation. It might be of interest, however, after computing the home-gardening/home-canning cost for a given commodity (under given, local conditions), to compare that cost with the average price of comparable, commercially-canned material over the next 12 months, to calculate the cost saving (if any) and then divide that figure by the number of hours of labor expended. The figure thus arrived at will represent the $/hour 'earned' by that individual for his labor. Then the question can be posed, 'Was it worth it?'"[5]

[5] Wishnetsky, T., and Cash, J. *Cost of Home Gardening and Canning Green Beans and Tomatoes.* Michigan State Univ. 1975.

In comparing the cost of home-canned foods with commercially canned ones, some differences were found by the Cornell researchers (table 4). The greatest savings from time spent was in canning tomatoes. This documents an earlier assumption that home canning provides substantial savings if produce is homegrown and jars and equipment are available from previous years. It points out that there are only small savings if jars and produce have to be purchased. The savings are further reduced if commercially canned foods can be bought in case lots at special discounted prices.

The home canners may wish to consider several other factors:

- Adequate space for storage. Food may freeze and jars burst, resulting in loss of both jar and food. Overheated storage space lowers the quality of the food. Jars may be accidently broken if stored in the living areas of the house.
- Creativity in canning and canning without exact instructions may result in food waste and family illness due to food spoilage.
- Home-canned foods should be boiled 10 minutes or more, unless the canner is absolutely sure of the method.
- Some foods (for example, fresh carrots) are available year round at reasonable cost.
- Home-canned tomatoes or juice is far more expensive as a source of vitamin C than commercially canned or frozen orange juice. When canning supplies and freezer space are limited, canners should consider carefully the nutritional value of foods available for preserving.
- It is economical to can and freeze only the amount that can be used in a reasonable length of time.

Canning is probably the most economical and practical method of preserving food in the home. Home canning can provide a great feeling of personal accomplishment; it can bring family members together in creative activity; it provides security in having food within arm's reach; it offers a supply of food prepared according to family preferences and special dietary needs.

The most economical preservation method depends on that family's eating habits. You can't save money by canning green beans when your family only likes frozen ones. You can't save money by growing a garden and canning and freezing food unless someone takes the responsibility for getting the work done.

Table 4. Comparison of costs of home and commercially canned foods (Quart of canned product)

Source of jars	Source of produce	Cost	
		Home canned [1]	Store bought [2]
Peaches			
On hand	Gift	20.5¢	94¢ to $1.10
Do	Bought	66.8¢	
Purchased	Gift	44.2¢	
Do	Bought	90.5¢	
Tomatoes			
On hand	Gift	4.3¢	64¢ to 90¢
Do	Bought	29.3¢	
Purchased	Gift	25.9¢	
Do	Bought	50.9¢	
Green Beans			
On hand	Gift	3.9¢	62¢ to 78¢
Do	Bought	41.4¢	
Purchased	Gift	25.5¢	
Do	Bought	63.0¢	

[1] Using electricity.
[2] April 1975, Ithaca, N.Y.
Source: Klippstein, R. B., and Wallace, E. *Actual Costs of Home Food Preservation.* Division of Nutritional Sciences, Coop. Ext. Serv., Cornell Univ. 1975.

AMENDMENTS TO REAL ESTATE SETTLEMENT PROCEDURES ACT

The Real Estate Settlement Procedures Act of 1974, which became effective June 20, 1975, has been amended as of January 2, 1976. The requirement for disclosure of settlement costs 12 days before closing has been repealed. Instead, a new section was added to the act, requiring that the setlement statement be made available to the borrower one business day before settlement. The original legislation also was amended to repeal the requirement that the statement of settlement costs (Uniform Settlement Statement) contain Truth in Lending information, and the requirement that the previous selling price of existing real property be disclosed. Implementation of these new regulations will take place June 30, 1976.

HOW HOUSEHOLDS USE ENERGY[1]

by Dorothy K. Newman and Dawn Day[2]

Being patriotic today now includes saving energy. Energy shortages and pollution from excessive energy use are the subject of heightened notice in the media and by all levels of Government. This article explores just how households use energy, and the limits and potentials for energy conservation.

The information on how American households use energy is based in part on two national sample surveys: (1) A survey of households, and (2) a survey of the electric and natural gas utilities that serve them. The first survey found out about the energy-using characteristics of the households themselves and of their dwellings in the spring of 1973. In the second, utilities (after authorization from the households) provided the actual amount and cost of the electricity and natural gas their customers used in a 12-month period of 1972-73.

The two sets of information—from households and their utilities directly—made it possible to match the exact amount and cost of electricity and natural gas used with each household's characteristics and the characteristics of their home. Answers from the households also gave the basis for getting information about car and gasoline use.

The work was done in the Washington Center for Metropolitan Studies with funds from the Ford Foundation.[3]

The Household as Energy Consumer

The main findings are repeated in virtually every area into which the investigation reached. They showed, without doubt, that the more money you have, the more energy you use at home and in your automobile.[4] This is regardless of any other condition—climate; how and how far you commute to work; the size of your house; your age; number in the household; and whether your house is protected from the weather by insulation. Paradoxically, the better off you are, the more likely you are to have equipment that saves energy and a house and equipment that use a lot of energy.

Another key finding is that almost all households have a limited choice, especially about the most energy-related features of their house—the design, the furnace, and the water heater. The structure and built-in equipment are there when most households buy or rent a dwelling. If you judge energy use on the basis of the number of major appliances in a home, as many do, you would be right, but only because the presence or absence of major appliances is a key indicator of total energy consumption and is linked chiefly with income. Appliances, which are usually bought separately and are not built in, do not use much energy by themselves. Therefore, what one chooses and buys separately is less important to the energy consumed at home than the basic features of the structure, about which a household has had little to say.

Limited choice is reflected also in the degree to which households use automobiles. Whether poor or rich, few workers felt they had a choice in how they commuted to their jobs. Either they used a car or had a time-consuming

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[1] This article is condensed from a paper given at the National Agricultural Outlook Conference in November 1975. The complete paper may be ordered from the Consumer and Food Economics Institute (see page 2 of cover for address).

[2] Respectively, Director, Project on Race and Social Policy, Washington, D.C., and Assistant Professor, Brooklyn College of the City University of New York, and Research Associate, Project on Race and Social Policy.

Views expressed are those of the authors.

[3] Additional results from this study are available in *The American Energy Consumer*, by D. K. Newman and D. Day. Massachusetts: Ballinger, 1975.

[4] Four income groups are used in this analysis: Poor, lower middle, upper middle, and well off. Families and individuals were defined as poor if their incomes fell below certain levels. The levels varied with size of the family and were based on the U.S. Government's definition of poor and near poor for 1972. In our study, the average income of poor households was $2,500.

The lower middle income group includes all the nonpoor whose income was under $12,000 in 1972. The average income of lower middle income households was about $8,000. The upper middle income group includes those with incomes between $12,000 and $15,999 in 1972; their average income was $14,000. The well off are those with incomes of over $16,000; their average income was $21,500. The poor, upper middle income, and well off income groups each comprise about a fifth of all households, and the lower middle income group comprises about two-fifths.

struggle with poorly routed public transportation. Therefore, almost all the chief breadwinners in American families use a car to get to work.

Lack of choice reaches far and deep. Exclusionary housing patterns affecting lower income and black households leave them even less choice than others in the dwellings they live in, and therefore, in the energy-using features of their homes. Automobiles use more energy and are more expensive. The 1973-74 price increases, during the energy crisis, were greatest for compacts that cost and weighed the least. Those who produce homes and the facilities in them that determine how much energy people use have been making their products more energy consuming and costly. For instance, a frostless refrigerator uses two-thirds more energy than a regular refrigerator and today's regular kind uses over twice as much energy as the models sold in 1950.

The costs are increasingly burdensome on those at the lower end of the income range because they have fewest options. They are least able to afford the sharply rising prices for every energy source. In addition, both electricity and natural gas prices are ordinarily higher the less you use. Poor and low-income households, who use the least amount, pay more per unit (that is, per million Btu's) than the well off.

The inevitable conclusion is that households may be able to play only a modest role in energy conservation by themselves. Possible exceptions are the well off who have most options. Even they are locked into a given housing stock and certain transportation alternatives. Conservation then, is everybody's business if the public is to save energy. To a large extent the buck passes to commerce and industry; to State and local governments that can modify land use, zoning, and building--permit regulations; to various arms of the Federal Government that administer or enforce housing laws and utility and environmental regulations; and, finally to the Congress. The Congress could enact legislation that would remove some large remaining roadblocks that hinder free choice and energy-saving alternatives in housing and transportation. If households had more choice, they would save energy. We found that people at all income levels were aware of how to save.

The dwelling. The basic level of household energy use for heating, which accounts for most of every family's energy consumption, is determined by climate and the structure of the dwelling itself. Once location is decided, climate is outside the household's control. The dwelling structure is usually outside the family's control as well. Most people live in homes built long before they moved in. Even families buying a new house have little to say about the design. Their new home is likely to be one of a dozen or more mass-produced for sale by a developer who uses a set of master blueprints rather than a home the family built for themselves.

An important principle of energy conservation is that the more a dwelling is protected from the weather, the less energy it needs for heating. Thus—all other factors being equal—an apartment uses less energy than a rowhouse (or townhouse) of the same size, a rowhouse uses less than a semidetached house, and a semidetached house uses less than a free-standing single-family home.

The type of heating system makes a difference. An electrically heated home requires about twice as much fuel per unit of heat as a similar gas- or oil-heated home. The presence of at least one thermostat or radiator valve is important to permit the family to control room temperature.

Any openings in a building, such as doors or windows, are places for heat to escape in the winter or to enter in the summer. The type of window also makes a difference. The most common type of window—double hung—is the most energy conserving. Casement and sliding windows are less energy conserving since they have more crevices and leaking areas for hot or cold air to move in or out. Wood frames provide better protection than metal; double-glazed (thermopane) glass gives more protection than conventional (single-glazed) glass. The larger the window, the more heat is likely to be lost. Storm windows, storm doors, and weatherstripping can reduce heat loss.

Most of these structural characteristics that affect energy use are determined at the time of construction and may be impossible, or at least difficult and expensive, to change. This is true of square feet of floor space, size, shape, number of windows and doors, degree of insulation, and type of roof and foundation.

In the face of these facts, analyses of data from the U.S. Bureau of the Census show a distinct trend toward more energy-using characteristics in the design of American dwellings. For instance, the single-family home—the most energy-using type of structure—has become more common, rising from housing two-thirds of all American households in 1940 to three-fourths by 1973.

The new one-family houses being built and added to the housing supply each year have an increasing number and proportion of energy-using features. More homes are being built with electric heating, central air-conditioning, and slab foundation. The trends are sharp.

Even though new housing is a small percentage of the total housing stock, it is an important part because it will remain and influence household energy use for years.

Home improvements are possible, but the most energy saving—such as installation of storm windows and insulation—are expensive. The initial cost is beyond the ability of poor and many lower middle-income households to pay out directly, and credit costs are high. For many households, installation depends on the landlord. The poor and lower middle-income households have more windows that are without storm sash in their homes. These households are also the most likely to be without insulation. Further, if you heat with natural gas, as most people do, a storm window will pay for itself in as few as 10 years only in very cold climates (table 1).

Although families may not be able to afford storm windows or to save money by installing them, the energy savings possible are high and could be very important to the country. A home with the average number of windows (12) would conserve over 20 million Btu's of natural gas in a year. This is the equivalent of 13 percent of the natural gas used by the average family that uses natural gas for heating.

Lifestyle—The family's use of the home. While the structure of the dwelling determines a basic level of energy use, the family's style of living can make some difference. For example, a family can influence its own energy use by turning down the thermostat in winter or turning off the natural gas pilot light in summer.

The survey findings show that households generally tended to keep their winter home temperature between 70 and 72 degrees during the day and below 70 at night. These temperatures were reported in the spring of 1973, even before the Government urged us to "dial down."

Turning off the pilot light of a natural-gas furnace during the summer is a good way to save energy. In the summer before the energy crisis of 1973-74, about 13 million households saved energy by having their pilot lights turned off in the summer. Another 25 million left their furnace pilot lights on. If these 25 million households had turned off their furnace pilot lights, the country would have saved 58 trillion Btu's of energy, about 1 percent of the total natural gas households consumed in 1972-73. The dollar savings per household would have been about $2.70 and is about $5.00 today.

These low savings are little incentive, especially when you have to call the gas company to turn the pilot light off in the spring and light it in the fall. If the gas company charges the household directly for this, and many do, the charge could wipe out the dollar savings.

Cooking and refrigerating appliances account for about 6 percent of all personal energy consumption. Other appliances and lighting use an additional 9 percent—15 percent in all.

How much energy an appliance uses in a given year depends on how much energy it takes to run the appliance per second or per hour and how much the appliance is used. For example, the average wattage (energy per second) of a microwave oven is 1,450. This is over four times the wattage of a 12-cubic-foot, frost-free refrigerator. Yet, over a year, the oven uses less than a fifth as much energy as the refrigerator because the refrigerator is plugged in all the time while the microwave oven is very seldom in actual use.

Most electrical and gas appliances on the market have increased in energy use per appliance since the fifties. For instance, in 1950 a prosperous homeowner could buy something called a home freezer cabinet (using 620 kWh per year). By 1959 the freezer was on the market (using 860 kWh per year). By 1969 the thing to buy, if budget permitted, was a frost-free freezer (using 1,761 kWh). The increase in size and convenience is undeniable. So is the increase in energy use (180 percent). Increases occurred elsewhere too. The room cooler (935 kWh) became the window air-conditioner (1,389 kWh). The wringer washer (45 kWh)

Table 1. Annual cost vs. savings for installing one storm window, two selected cities, December 1973[1]

Years	Atlanta			Boston		
	Storm window cost	Natural gas cost savings		Storm window cost	Natural gas cost savings	
		Heating & air-conditioning	Heating only		Heating & air-conditioning	Heating only
	Dollars					
1	23.95	1.92	1.58	30.63	5.24	5.12
2	25.27	3.95	3.25	32.31	10.77	10.52
3	26.66	6.09	5.01	34.09	16.60	16.22
4	28.13	8.34	6.87	35.96	22.75	22.23
5	29.68	10.72	8.83	37.94	29.24	28.57
6	31.31	13.23	10.90	40.03	36.09	35.26
7	33.03	15.88	13.08	42.23	[2] 43.31	[2] 42.32
8	34.85	18.68	15.38	44.55	50.93	49.77
9	36.77	21.62	17.81	47.00	58.97	57.63
10	38.79	24.73	20.37	49.59	67.45	65.92
11	40.92	28.01	23.07	52.32	76.40	74.67
12	43.17	31.47	25.92	55.20	85.84	83.90
13	45.54	35.12	28.93	58.24	95.80	93.63
14	48.04	38.97	32.10	61.44	106.31	103.90
15	50.68	43.03	35.45	64.82	117.40	114.73
16	53.47	47.32	38.98	68.39	129.10	126.16
17	56.41	51.84	42.70	72.15	141.44	138.22
18	59.51	56.61	46.63	76.12	154.46	150.94
19	62.78	61.64	50.77	80.31	168.20	164.36
20 [3]	66.23	[2] 66.95	55.14	84.73	182.69	178.52

[1] December 1973 prices were used for storm windows and natural gas.
[2] The year when the storm window pays for itself.
[3] Not computed after 20 years.

Source: Newman, D. K., and Day, D. *American Energy Consumer*. Massachusetts: Ballinger, 1975, (table 3-12, p. 46).
Derived using the following method: Each storm window is assumed to be 15 square feet, the usual size of a double-hung window. Storm-window prices are for medium-priced aluminum sash sold at retail and installed in each of the cities by Sears, Roebuck and Company. Natural gas prices are as of December 1973, from the U.S. Bureau of Labor Statistics. Storm window costs and energy cost savings are computed assuming a 5.5 percent interest rate, compounded annually.

became the automatic clothes washer (103 kWh).

Not every household has all types of appliances. Refrigerators, stoves, and television sets are most common—almost all households have them. Three-fourths of all households have clothes washers too, either wringer or automatic. About half of all households have clothes dryers. A third have food freezers. Substantial differences exist between households in appliance ownership, by income class.

Consumers may exercise considerable discretion in buying appliances and water heaters since the equipment is often not part of the structure. Even here choice is limited. First, a family may not be able to afford the item. For instance, a family trying to make ends meet would have little incentive to replace an electric water heater with a more energy-conserving gas water heater.

A customer is limited by what is available in the stores. For example, virtually all refrigerators now sold at retail are the more energy-intensive frost-free variety. Bearing this out, all refrigerators priced for the Consumer Price Index of the Bureau of Labor Statistics are frost free.

The Energy Gap

Now that Americans have learned that fossil fuel energy, like all natural resources, is finite, they must consider distribution and pricing policies to give all Americans a fair share of energy. Present maldistribution must be recognized, as well as the possibility of present and future shortages.

The poor use less energy; they pay higher prices for the energy they must have; and they, more than any other group of Americans, suffer from exposure to the noxious byproducts of energy consumption and production.

Energy used by the poor is almost entirely for essentials—space and water heating, cooking, food refrigeration, and lighting.

When fuel supplies are limited and increasingly expensive, the wealthy can buy as much as they want if price is the only obstacle. The poor, on the other hand, are inevitably deprived by rising costs. They are forced to forego some measure of pleasant or necessary life support—if not in heat and light, or in gasoline for necessary transportation, then in the loss of amenities.

In 1972-73 poor households used an average of 207 million Btu's of natural gas, electricity, and gasoline. The well off used more than twice as much. The middle-income groups fell between. The same stairstep pattern occurs for each fuel separately. The incline of the steps differs, however.

As income rises, the increase in natural gas consumption is gradual; the increase in electricity is intermediate; and the increase in gasoline is sharp. The well off use almost one and one-half as much natural gas as the poor, over two and one-fourth as much electricity, and over five times as much gasoline. The well-off use more of each than the middle-income groups, but the differences are not as great.

Natural gas is used primarily for heating and cooking. It seems reasonable that, for these necessities, the less advantaged cannot reduce consumption much below that of the well off. Conversely, there would seem to be little reason for the well off to increase their consumption greatly.

Electricity is used mainly in appliances and lighting, and this is part luxury and part necessity. Here, as with natural gas, there seems to be a point when the well off prefer to spend their money for things other than electricity-using devices.

Gasoline is truly the fuel of both necessity and pleasure. Gasoline may be necessary for shopping and commuting to work, but many gallons of gasoline are consumed for family vacations, weekend excursions, second cars, extra large cars, and so on. It is for these reasons that the well off use more than five times as much gasoline as the poor and more than twice as much as the lower middle-income group.

The poor and the lower middle-income households use less fuel for the essentials of heating, lighting, and cooking because they are forced to be thrifty and because their homes are modest. They are more likely to live in apartments or homes with only a few rooms and a few windows (table 2).

Virtually all poor households have a refrigerator, a stove, and a television. The refrigerator and stove are unquestionably necessities. By today's American standards, television provides an economical form of entertainment. With any particular appliance, the poor are less likely to have the more energy-intensive model.

Table 2. Climate and housing characteristics, by income, 1973

(Percent of households)

Climate and structural characteristics	Poor	Lower middle	Upper middle	Well-off
All households	100	100	100	100
Climate under 3,500 heating degree days	41	33	29	25
Apartment	32	26	13	8
Less than 5 rooms	47	35	18	8
Living room less than 200 sq ft	62	55	36	29
Less than 15 windows	82	73	67	45
No picture window	70	56	38	29
Some storm windows	31	49	54	63
Protected doors [1] [2]	41	53	58	70
Basement in single-family homes	31	45	52	61
Insulation in single-family homes [2]	41	78	86	94

[1] Includes entrances with storm doors and doors opening on to apartment hallways and other heated areas.
[2] Excludes unknowns.

Source: Newman, D. K., and Day, D. *American Energy Consumer.* Massachusetts: Ballinger, 1975, (table 5-5, p. 94).

For example, the poor are less likely than other households to have a color TV or frost-free refrigerator. Aside from the refrigerator, stove, and TV, poor households are much less likely than others to have and enjoy the convenience of major appliances.

The energy gap is greatest in gasoline use. Almost 50 percent of all poor households and over 15 percent of all lower middle-income households have no car. The well off have more than one car.

Poor and lower middle-income households with cars use less gasoline because they go fewer places and because their cars get better gasoline mileage. They get better mileage because these groups own the older cars that tend to weigh less than newer models and are without such gasoline-consuming extras as air-conditioning and power steering.

These facts are helpful in shaping energy policy. They establish by whom and where household energy conservation is practiced. A family's ability to cut back energy use is limited by the size of the home and its location, and basic appliance and transportation needs. Only over the long haul can these be exchanged for more energy-efficient living conditions.

In the meantime, when the focus is on ultrahigh energy use today and on energy conservation, the spotlight needs to be on the well off. Well-off households use the most energy and have the present resources to make energy-conserving improvements.

THE IMPACT OF INFLATION ON FAMILIES[1]

by Nancy S. Barrett and Anita Driscoll[2]
Congressional Budget Office

Inflation is a very general term that refers to an increase in some weighted average of the prices of goods and services produced or consumed in an economy. To arrive at a measure of inflation that has economywide significance, individual price changes must be weighted according to the importance of the commodities and services in the economy: Food price changes, for instance, have a larger weight than price changes for pianos.

There are various measures of inflation, the most commonly cited ones being the Consumer Price Index, the Wholesale Price Index, and the Gross National Product (GNP) deflator. Each of these price indexes encompasses a different mix of goods and services and applies different weights to price changes. It is impossible, however, to gage the actual increase in living costs for any particular family on the basis of any readily available price index, since the composition of purchases for any particular family will not be identical to the weights assumed in constructing statistical price indices. The consumption pattern used to construct the Consumer Price Index (revised in 1964), for instance, is based on a 1960-61 expenditure survey of urban wage earners and clerical workers. Its applicability to broader segments of the population (or later time periods) is certainly questionable. For instance, when food prices rise, families that allot a greater proportion of their budget to food than the families surveyed will experience a greater increase in living costs than is shown by the Consumer Price Index.

Not only are there various ways to measure inflation, but there are many different channels through which the inflationary process is transmitted. Differences in the underlying causes of inflation, even more than measurement problems, can affect the way inflation impacts on the family.

EXCESS-DEMAND INFLATION

Consider the case of an inflation triggered by an excessive demand for labor. This type of inflation occurred in the late sixties in the economic expansion associated with the Vietnam buildup. Although prices increased throughout the economy, labor was in short supply relative to some other resources. In the long run, firms could substitute capital and other materials for labor. In the short run, however, not much substitution took place, and real wages—particularly in the industrial and service sectors—rose relative to real GNP. This meant a real increase in the spending power of the household sector.

From a macroeconomic point of view, inflation caused by an excess demand for labor has an *expansionary* effect on the economy. The process feeds on itself since increased household purchasing power and spending increases the demand for goods and services, and hence the demand for labor, still further.

A 1970 study by two University of Wisconsin economists, Hollister and Palmer, investigated the effect of excess-demand inflation on the distribution of income within the household sector.[3] They concluded that the poor may benefit as much as other wage earners since improved employment opportunities are available and transfer payments, such as social security and food stamps, tend to rise faster than prices in these periods. Further, erosion of wealth due to inflation affects the rich more than the poor, so that inflation tends to equalize wealth.

To the extent that an excess-demand inflation redistributes income to wage earners and the poor and redistributes wealth, this type of inflation could potentially reduce inequality. However, the distributional impact may vary with the skill level of wage earners, with some highly skilled workers gaining most, so that the

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[1] This article is a condensed version of a paper presented at the National Agricultural Outlook Conference in November 1975. The complete paper may be ordered (see page 2 of cover for address).

[2] Respectively, Deputy Assistant Director for Fiscal Policy and Staff Economist, Congressional Budget Office. The views expressed are those of the authors and not of the Congressional Budget Office.

[3] Hollister, R. G., and Palmer, J. L. The impact of inflation on the poor. *In* Boulding and Pfaff (eds.), *Redistribution of the Rich and Poor. The Grants Economics of Income Redistribution.* California. Wadsworth, 1972.

overall distributional consequences are very uncertain.

COMMODITY INFLATION

More recently, a different type of inflationary process has emerged with totally opposite consequences both for overall household spending power and for the distribution of incomes within the household sector. Inflation beginning in 1972 was triggered primarily by relative increases in food and energy prices. From January 1973 to July 1975, food prices rose some 37 percent, while the nonfood component of the Consumer Price Index rose 23.6 percent. Hourly compensation increased 20.1 percent over the period, while real spendable weekly earnings outside agriculture declined 5.6 percent. Further, the price of petroleum increased over 400 percent, with other energy prices also increasing. The ripple effects of these developments were not inconsequential as wage earners and business managers attempted to recoup their declining real incomes through higher wages and profits. A highly restrictive fiscal and monetary policy that reinforced the erosion of real spending power in the private sector resulted in a severe recession that greatly restricted the ability of workers to maintain their real earnings and the ability of firms to increase prices to restore their profits. Unemployment reached 9 percent and industrial capacity utilization fell by 63 percent.

Effect on Overall Household Spending

From a macroeconomic perspective, higher food and energy prices have a *deflationary* effect on economic activity since they reduce the real spending power of the household sector, producing a real cutback in the demand for goods and services. The costs of higher food prices for American households since 1973 are estimated to be about $55 billion. Higher energy prices added $40 billion to the fuel bills of Americans. Weighed against a GNP of around $1,300 billion in 1973, this represents a sizable deflation in a real purchasing power for the economy as a whole.[4]

Coupled with this overall reduction in spending power are several major income transfers. Higher food prices, for instance, transfer incomes from nonfarm to farm households. Farm families, however, also must pay higher prices for the food they eat. Further, farm households typically spend a smaller percentage of their incomes than urban households. The net effect is a decline in the overall spending in the economy.

Higher petroleum prices transfer income both to OPEC (Organization of Petroleum Exporting Countries) nations abroad and to domestic oil companies. In the first case, there is a net drain in purchasing power. In the second case, whether an increase in oil company profits deflates overall spending depends in large measure on the uses to which the proceeds are put. The initial impact of higher oil prices since 1973 has been a sizable reduction in household's purchasing power. It is unlikely that the spending propensities of the oil companies from their profits are as high as those of families from their incomes.

Effect on Various Population Groups

Several factors should be considered when assessing the effect of commodity inflation on the distribution of incomes within the household sector.

- The poor spend a larger proportion of their incomes on food, gasoline, and home heating fuels than do affluent families and, therefore, have experienced greater increases in their living costs for these items.[5]
- The unskilled, disadvantaged worker is more likely to become unemployed in a recession than the skilled, high-income worker.
- Some categories of workers are better able than others to obtain cost-of-living adjustments in their incomes.
- As farm prices rise, the gains go primarily to high-income farmers, with low-income farmers experiencing little improvement in their real incomes.

[4] A simple way to calculate the effect of higher food prices on the household sector is to observe that food represents about 25 percent of the average household budget. Thus, a 10 percent rise in food prices reduces consumer real incomes by 2.5 percent.

[5] Higher energy costs result in higher prices throughout the economy. The higher food prices thus generated fall more heavily on the poor, yet the overall effect on the family budget is indeterminate except for the specific cases of gasoline and home-heating fuels.

- Asset holders experience erosions of their wealth in an inflation while debtors' real obligations fall.

The first four factors—income effects—suggest that higher food and fuel prices produce an inflationary environment that worsens the inequality of income distribution within the household sector, with the burden falling disproportionately on the poor. The last factor—wealth effect—works in the other direction.

Regressive effects on real income.[6] The table provides estimates of an average household's total budget spent for food at different income levels in 1972 and 1974. The lowest income group spends over 40 percent of its income on food while the highest income group spends about 10 percent on food. With food prices rising 37 percent from January 1973 to July 1975, the burden falls more heavily on the poor. For example, if the poor spend two-fifths of their budget on food, and food prices rise 37 percent combined with a 24 percent rise in all other items, the weighted impact on the poor becomes (2/5 X 37) + (3/5 X 24), or 29 percent. In contrast, the affluent spend one-tenth of their budget on food. The weighted impact of the price rises on the affluent becomes 25 percent. The poor are also at a major disadvantage in that their consumption is limited to begin with so that a shift to less costly items is not always possible. This is due in part to the disappearance from the market of many simple, less expensive foods.

A similar analysis can be done for gasoline expenditures by income group as this is another component of the budget that has shown dramatic price increases. The poor, as an income group, spent some 5 percent of their average weekly income on gasoline during the period July 1972 to June 1973. The affluent (average income of $17,749) spent under 3 percent of their weekly income on gasoline during the same period. As gasoline prices have continued to increase since that time, it becomes obvious that these expenditures are falling heavily on the poor. In addition, low-income households spend an average of more than 11 percent of their income on natural gas and electricity, compared with less than 2 percent for households with annual incomes over $16,000.

Food expenditure as a fraction of income by income decile for 1972 and 1974

Income decile	Food/income	
	1972	1974
	Percent	
Lowest	40.1	46.6
Second	31.1	32.7
Third	25.1	28.0
Fourth	21.2	22.4
Fifth	19.1	20.8
Sixth	17.5	18.9
Seventh	15.8	17.6
Eighth	14.0	14.9
Ninth	13.1	14.3
Highest	10.8	11.4
Average	20.7	22.8

Source: Draft chapter, vol. 4, Five Thousand Families: Patterns of Economic Progress, Institute for Social Research, University of Michigan, 1975.

Thus, an increase in prices of food, gasoline, and home-heating fuel affects the poor proportionately more than other groups in society. Yet, recession cannot be viewed as a trade-off to ease the burden of price increases on this group because it is the poor—the unskilled, disadvantaged worker—that are more likely to be unemployed in a recession. By race, blacks are hurt more by the increase in unemployment (as measured by the absolute increase in their unemployment rate). Blacks also fall more heavily into the category classified as poor. By sex and age, women and teenagers experienced greater increases in their unemployment rates also. By occupation, blue-collar workers, particularly operatives and nonfarm laborers suffer the most unemployment. These are the unskilled workers who fall heavily into the category of "poor." By industry, the burden of unemployment fell heaviest on construction and manufacturing, areas that are heavily unionized but where nonunion jobs are low paying and insecure.

Not only do the poor receive a disproportionate share of the burden of both commodity inflation and unemployment, but many

[6] Real income is purchasing power of income, for example, money income adjusted to reflect price changes in the goods and services purchased by the family.

poor families are less able than others in the population to obtain cost-of-living adjustments—such as escalator clauses in collective bargaining contracts—in their incomes.

Escalator clauses have played a significant role in wage determination in union contracts since World War II, but they have operated in a cyclical fashion—being very common during periods of inflationary expectations and less common during periods of stable prices. The seventies have shown an increase in escalator clauses, but the clauses still cover a small fraction of the American work force. For example, in 1974 the U.S. labor force numbered 91.1 million persons. Average employment for the year in nonagricultural establishments (including government) was 78.3 million. Of this number, only 7.7 million or some 9.8 percent were covered by escalator clauses. The average increase for workers covered by escalator clauses has been considerably less in recent years than the increase in prices. During 1974 the Consumer Price Index (CPI) rose by 12.2 percent. Some 31 percent of the workers covered by escalator clauses (mostly in trucking) received less than 2 percent by way of escalator wage increases. Of the covered workers, 14 percent received wage increases between 8 and 9 percent, 29 percent received increases between 9 and 10 percent, and 7 percent (under 1 percent of the entire work force) received increases of 10 percent or more. Thus, escalation clauses do not offer widespread protection to the U.S. work force against the burden of higher prices.

The poor do benefit from cost-of-living adjustments, however, in cases where transfer payments are tied to the CPI. The main examples of these are social security payments and food stamps.

Food stamp bonus payments are tied to the food component of the CPI. Yet, the payment schedule is only revised every 6 months as an after-the-fact recognition of higher food prices. The interim excess expenditures are not made up nor is recognition given to anticipation of further food price increases. Further, food stamps do not always cover a family's total food bill since coverage is on a sliding scale that depends on income. Despite the rapid expansion of this program over the past few years, the Senate Select Committee on Nutrition and Human Needs has estimated that only 38 percent of those eligible for food stamps are receiving them.

Thus, while the poor are hurt proportionately more by rising food prices, a third of this group is at least partly protected from the impact. Of the two-thirds remaining, it is probable that some are benefiting from other transfer payments that cover some of the burden of higher food prices. Yet, these figures indicate that the burden falling on the poor is still very great.

Higher food prices reduce real incomes in the nonfarm economy, but increase incomes in the farm sector. Total farm income (net of expenses) increased 43.4 percent between 1972 and 1974. Within the farm sector, however, these gains were not distributed evenly. It is not the small single-family farm that benefited, but rather some 35 percent of this income went to commercial farms with over $100,000 in sales, which make up only 4 percent of all farms.[7]

Thus, while farmers gain at the expense of the consumer, small farmers gain very little at all while large farmers make more substantial gains. The same might be said for the gains of large oil companies—both domestic and foreign—when oil prices rise.

Wealth effects. While the income transfers associated with a commodity price inflation tend to be regressive, the wealth effects act in the opposite direction. Higher prices erode the value of fixed value assets and also reduce the real value of debts. The recession also produced a sharp decline in equity prices, contributing to a decline in the market value of paper assets. Property that is not fixed in value, however, like real estate, will not be affected and may even gain in value relative to the increase in consumer prices.

These wealth effects most likely took their heaviest fall on upper income families. The very poor would not be likely to feel much effect in either direction, since they are neither asset-holders nor debtors (not being good credit risks). The distributional impact among middle-income families is less certain, since the balance sheets of families in the middle-income ranges vary widely with respect to indebtedness, net worth, and the composition of assets.

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[7] U.S. Department of Agriculture, Economic Research Service, *Farm Income Statistics*, July 1975.

SOME NEW USDA PUBLICATIONS

(Please give your ZIP code in your return address when you order these.)

The following are for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402:

- NEW LIFE FOR OLD DWELLINGS: APPRAISAL AND REHABILITATION. AH 481. December 1975. $1.70.
- NUTRITIVE VALUE OF AMERICAN FOODS—IN COMMON UNITS. AH 456. November 1975. $5.15.
- THAT WE MAY EAT. 1975 Yearbook of Agriculture. $7.30 (hardback).

Single copies of the following are available free from the U.S. Department of Agriculture. Please address your request to the office indicated.

From Office of Communication, Washington, D.C. 20250:

- GROWING BLACKBERRIES. FB 2160. Revised October 1975.
- CONTROLLING TOMATO DISEASES. FB 2200. Revised September 1975.
- HOW TO MAKE JELLIES, JAMS, AND PRESERVES AT HOME. G 56. Revised December 1975.
- GROWING FLOWERING ANNUALS. G 91. Revised October 1975.
- HOMEMAKERS' FOOD AND NUTRITION KNOWLEDGE, PRACTICES, AND OPINIONS. HERR 39. November 1975.

From Economic Research Service, Division of Information, Washington, D.C. 20250:

- FARM POPULATION ESTIMATES FOR 1974. AER 319. December 1975.

From Food and Nutrition Service, Information Division, Washington, D.C. 20250:

- FOOD STORAGE GUIDE FOR SCHOOLS AND INSTITUTIONS. PA 403. Revised November 1975.

From Statistical Reporting Service, Information Division, Washington, D.C. 20250:

- SCOPE AND METHODS OF THE STATISTICAL REPORTING SERVICE. M 1308. July 1975.

THE HIRED FARM WORKING FORCE OF 1974

In 1974, there were approximately 2.7 million persons 14 years of age and over who did farm wagework at some time during the year. The hired farm working force has changed little over the past 3 years. Thus, the annual employment of farmworkers appears to have become stable after the long downward trend of previous years.

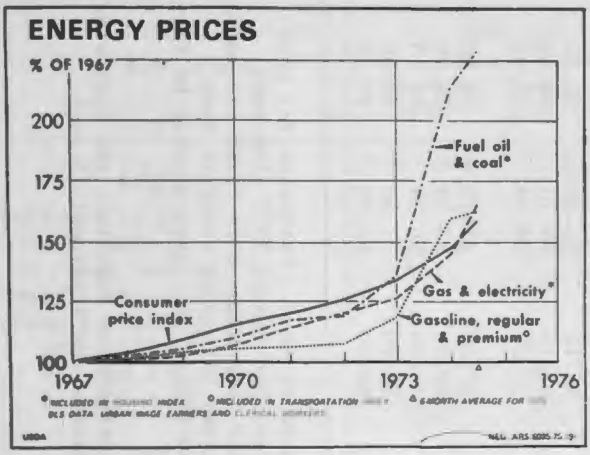
Generally, hired farm wageworkers were young (median age 23 years), white (83 percent), male (79 percent), and resided in nonfarm places (76 percent). They earned an average of $1,447 in annual cash wages, or $16.60 per day for 87 days of farm wagework.

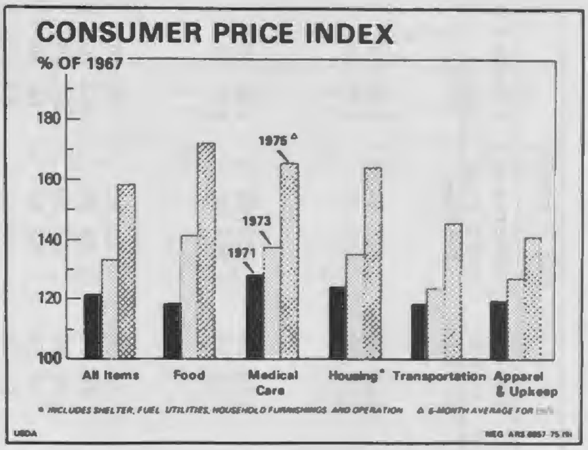
Approximately 1.6 million workers were employed solely in farmwork during the year; the remaining 1.1 million performed both farm and nonfarm work.

About 209,000 (8 percent) of the total were migratory farmworkers in 1974, the third consecutive year of increase. Annual earnings for these workers averaged $1,688, or $21.60 per day for 78 days of farmwork. Of all migrants 49 percent were only employed in farmwork during the year.

Source: U.S. Department of Agriculture, Economic Research Service, *The Hired Farm Working Force of 1974: A Statistical Report*, AER 297, July 1975.

SOME NEW USDA CHARTS[1]





[1] Black and white photographic prints or colored slides of charts may be ordered from Photography Division, Office of Communication, U.S. Department of Agriculture, Washington, D.C. 20250. Slides are 30 cents each and prints are $2.70 (8" X 10" or less). When ordering, please give negative number, title of chart, and, if a print, the size desired.

TO RENT OR BUY

The wide variety of choice in today's shelter market, the mobility of American families, and the opportunities for returns on savings in investments other than housing have all contributed to the complexity of decisions on whether to rent or to buy one's shelter needs. As a result, a sound decision cannot be based on a simple comparison of the monthly costs for owning and renting. A bulletin prepared in 1974 by Raymond W. Gieseman of the Bureau of Labor Statistics, U.S. Department of Labor, entitled "Rent or Buy: Evaluating Alternatives in the Shelter Market," describes a method of analyzing the financial costs and benefits of owning a home compared with renting in combination with a program of regular monthly savings over a specified period of time. The bulletin (No. 1823) may be ordered for 80 cents from either the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 (stock No. 029-001-01341-8), or from Consumer Information, Public Documents Distribution Center, Pueblo, Colo. 81009 (item No. 245C). A paper condensed from the bulletin was presented by the author at the National Agricultural Outlook Conference in December 1975. This paper is available from the Consumer and Food Economics Institute (see page 2 of cover for address).

The bulletin gives step-by-step calculations on how to determine the monthly rental rate which would permit the renter to equal the gains from ownership. The method assumes that the renter invests the money that would otherwise be required initially to purchase a house—such as a downpayment and settlement costs—and, in addition, follows a program of regular monthly saving. The estimate of the cost of owning a house includes the downpayment, settlement costs, the monthly mortgage payment, and other monthly outlays for real estate taxes, property insurance, maintenance and repairs, and utilities. The potential tax saving through the deduction of interest is considered. An estimate is made of the net proceeds from the sale of the house after a given number of years.

Cost of food at home estimated for food plans at four cost levels, March 1976, U.S. average 1/

Sex-age groups	Cost for 1 week				Cost for 1 month			
	Thrifty plan	Low-cost plan	Moderate-cost plan	Liberal plan	Thrifty plan	Low-cost plan	Moderate-cost plan	Liberal plan
	Dollars	*Dollars*	*Dollars*	*Dollars*	*Dollars*	*Dollars*	*Dollars*	*Dollars*
FAMILIES								
Family of 2: 2/								
20-54 years	22.10	28.90	36.30	43.70	96.10	125.30	157.30	189.40
55 years and over	19.80	25.60	31.80	38.20	85.80	110.90	137.70	165.10
Family of 4:								
Couple, 20-54 years and children--								
1-2 and 3-5 years	31.40	40.80	50.90	61.20	136.50	176.50	220.50	265.00
6-8 and 9-11 years	37.90	49.30	61.80	74.40	164.80	213.50	268.00	322.50
INDIVIDUALS 3/								
Child:								
7 months to 1 year	4.50	5.60	6.80	8.10	19.60	24.20	29.50	35.00
1-2 years	5.10	6.60	8.10	9.70	22.20	28.50	35.20	41.90
3-5 years	6.20	7.90	9.80	11.80	26.90	34.10	42.30	50.90
6-8 years	7.90	10.20	12.80	15.40	34.40	44.30	55.50	66.80
9-11 years	9.90	12.80	16.00	19.30	43.00	55.30	69.50	83.50
Male:								
12-14 years	10.60	13.60	17.10	20.50	46.00	59.00	73.90	88.80
15-19 years	11.70	15.00	18.80	22.70	50.50	65.10	81.60	98.30
20-54 years	11.10	14.60	18.40	22.20	48.20	63.10	79.70	96.30
55 years and over	9.80	12.80	15.90	19.20	42.60	55.30	68.90	83.00
Female:								
12-19 years	9.40	12.10	15.00	18.00	40.90	52.60	65.20	78.00
20-54 years	9.00	11.70	14.60	17.50	39.20	50.80	63.30	75.90
55 years and over	8.20	10.50	13.00	15.50	35.40	45.50	56.30	67.10
Pregnant	11.30	14.50	17.90	21.40	49.00	62.90	77.50	92.50
Nursing	12.00	15.40	19.20	22.90	52.10	66.80	83.00	99.10

1/ Assumes that food for all meals and snacks is purchased at the store and prepared at home. Estimates for each plan were computed from quantities of foods published in the Winter 1976 (thrifty plan) and Winter 1975 (low-cost, moderate-cost, and liberal plans) issues of *Family Economics Review*. The costs of the food plans were first estimated using prices paid in 1965-66 by households from USDA's Household Food Consumption Survey with food costs at four selected levels. These prices are updated by use of "Estimated Retail Food Prices by Cities" released monthly by the Bureau of Labor Statistics.

2/ 10 percent added for family size adjustment. See footnote 3.

3/ The costs given are for individuals in 4-person families. For individuals in other size families, the following adjustments are suggested: 1-person--add 20 percent; 2-person--add 10 percent; 3-person--add 5 percent; 5-or-6-person--subtract 5 percent; 7-or-more-person--subtract 10 percent.

Cost of food at home estimated for food plans at three cost levels, March 1976, Northeast Region 1/

Sex-age groups	Cost for 1 week			Cost for 1 month		
	Low-cost plan	Moderate-cost plan	Liberal plan	Low-cost plan	Moderate-cost plan	Liberal plan
	Dollars	*Dollars*	*Dollars*	*Dollars*	*Dollars*	*Dollars*
FAMILIES						
Family of 2: 2/						
20-54 years.............	30.60	39.30	47.30	132.80	170.20	205.20
55 years and over.......	27.10	34.30	41.20	117.40	148.80	178.80
Family of 4:						
Couple, 20-54 years and children--						
1-2 and 3-5 years.....	43.00	54.80	66.00	186.50	237.60	286.20
6-8 and 9-11 years....	51.90	66.50	80.10	225.30	288.30	347.20
INDIVIDUALS 3/						
Child:						
7 months to 1 year......	5.80	7.20	8.60	25.00	31.40	37.10
1-2 years...............	6.90	8.70	10.40	30.00	37.70	45.20
3-5 years...............	8.30	10.40	12.60	35.80	45.20	54.50
6-8 years...............	10.70	13.70	16.50	46.60	59.40	71.40
9-11 years..............	13.40	17.10	20.60	58.00	74.20	89.30
Male:						
12-14 years.............	14.30	18.30	21.90	62.10	79.10	95.00
15-19 years.............	15.80	20.20	24.30	68.40	87.50	105.40
20-54 years.............	15.40	19.90	24.10	66.90	86.20	104.40
55 years and over.......	13.50	17.20	20.80	58.60	74.50	90.00
Female:						
12-19 years.............	12.70	16.10	19.30	55.00	69.70	83.50
20-54 years.............	12.40	15.80	18.90	53.80	68.50	82.10
55 years and over.......	11.10	14.00	16.70	48.10	60.80	72.50
Pregnant................	15.30	19.30	23.00	66.30	83.40	99.80
Nursing.................	16.30	20.60	24.70	70.50	89.50	107.00

1/ Assumes that food for all meals and snacks is purchased at the store and prepared at home. Estimates for each plan were computed from quantities of foods published in the Winter 1975 issue of *Family Economics Review*. The costs of the food plans were first estimated using prices paid in 1965-66 by households in the Northeast from the USDA's Household Food Consumption Survey with food costs at three selected levels. These prices are updated by use of "Estimated Retail Food Prices by Cities" (Boston; New York, Northeastern New Jersey; Philadelphia) released monthly by the Bureau of Labor Statistics.

2/ 10 percent added for family size adjustment. See footnote 3.

3/ The costs given are for individuals in 4-person families. For individuals in other size families, the following adjustments are suggested: 1-person--add 20 percent; 2-person--add 10 percent; 3-person--add 5 percent; 5-or-6-person--subtract 5 percent; 7-or-more-person--subtract 10 percent.

Cost of food at home estimated for food plans at three cost levels, March 1976, North Central Region 1/

Sex-age groups	Cost for 1 week			Cost for 1 month		
	Low-cost plan	Moderate-cost plan	Liberal plan	Low-cost plan	Moderate-cost plan	Liberal plan
	Dollars	*Dollars*	*Dollars*	*Dollars*	*Dollars*	*Dollars*
FAMILIES						
Family of 2: 2/						
20-54 years............	28.80	35.50	42.90	124.70	154.00	186.00
55 years and over.......	25.50	31.10	37.40	110.40	134.90	162.30
Family of 4:						
Couple, 20-54 years and children--						
1-2 and 3-5 years.....	40.50	49.80	60.00	175.80	215.80	260.10
6-8 and 9-11 years....	49.10	60.60	73.10	212.80	262.70	316.80
INDIVIDUALS 3/						
Child:						
7 months to 1 year......	5.50	6.60	7.80	23.90	28.70	33.90
1-2 years...............	6.50	7.90	9.50	28.40	34.40	41.00
3-5 years...............	7.80	9.60	11.50	34.00	41.40	50.00
6-8 years...............	10.20	12.60	15.10	44.20	54.50	65.60
9-11 years..............	12.70	15.70	19.00	55.20	68.20	82.10
Male:						
12-14 years.............	13.60	16.70	20.10	58.90	72.50	87.30
15-19 years.............	15.00	18.50	22.30	64.90	80.10	96.80
20-54 years.............	14.50	18.00	21.80	62.90	78.10	94.60
55 years and over.......	12.70	15.60	18.80	55.10	67.50	81.60
Female:						
12-19 years.............	12.10	14.80	17.70	52.40	63.90	76.60
20-54 years.............	11.70	14.30	17.20	50.50	61.90	74.50
55 years and over.......	10.50	12.70	15.20	45.30	55.10	65.90
Pregnant................	14.40	17.50	21.00	62.50	75.70	90.80
Nursing.................	15.30	18.70	22.50	66.30	81.10	97.30

1/ Assumes that food for all meals and snacks is purchased at the store and prepared at home. Estimates for each plan were computed from quantities of foods published in the Winter 1975 issue of *Family Economics Review*. The costs of the food plans were first estimated using prices paid in 1965-66 by households in the North Central Region from the USDA's Household Food Consumption Survey with food costs at three selected levels. These prices are updated by use of "Estimated Retail Food Prices by Cities" (Chicago, Cleveland, Detroit, St. Louis) released monthly by the Bureau of Labor Statistics.

2/ 10 percent added for family size adjustment. See footnote 3.

3/ The costs given are for individuals in 4-person families. For individuals in other size families, the following adjustments are suggested: 1-person--add 20 percent; 2-person--add 10 percent; 3-person--add 5 percent; 5-or-6-person--subtract 5 percent; 7-or-more-person--subtract 10 percent.

Cost of food at home estimated for food plans at three cost levels, March 1976, Southern Region 1/

Sex-age groups	Cost for 1 week			Cost for 1 month		
	Low-cost plan	Moderate-cost plan	Liberal plan	Low-cost plan	Moderate-cost plan	Liberal plan
	Dollars	*Dollars*	*Dollars*	*Dollars*	*Dollars*	*Dollars*
FAMILIES						
Family of 2: 2/						
20-54 years.............	28.70	35.40	41.10	124.20	153.50	178.60
55 years and over.......	25.30	30.90	35.70	109.60	133.80	155.00
Family of 4:						
Couple, 20-54 years and children--						
1-2 and 3-5 years.....	40.20	49.50	57.60	174.30	214.50	250.10
6-8 and 9-11 years....	48.80	60.40	70.00	211.40	261.40	303.90
INDIVIDUALS 3/						
Child:						
7 months to 1 year......	5.40	6.60	7.70	23.60	28.60	33.40
1-2 years...............	6.40	7.80	9.10	27.90	33.90	39.60
3-5 years...............	7.70	9.50	11.10	33.50	41.10	48.10
6-8 years...............	10.10	12.50	14.50	43.70	54.10	62.90
9-11 years..............	12.60	15.70	18.10	54.80	67.80	78.60
Male:						
12-14 years.............	13.50	16.70	19.30	58.50	72.20	83.80
15-19 years.............	14.90	18.40	21.40	64.70	79.80	92.80
20-54 years.............	14.40	17.90	20.80	62.40	77.50	90.30
55 years and over.......	12.60	15.40	17.90	54.50	66.70	77.60
Female:						
12-19 years.............	12.10	14.80	17.10	52.40	63.90	74.10
20-54 years.............	11.70	14.30	16.60	50.50	62.00	72.10
55 years and over.......	10.40	12.70	14.60	45.10	54.90	63.30
Pregnant................	14.40	17.50	20.30	62.50	76.00	88.10
Nursing.................	15.30	18.80	21.80	66.30	81.30	94.30

1/ Assumes that food for all meals and snacks is purchased at the store and prepared at home. Estimates for each plan were computed from quantities of foods published in the Winter 1975 issue of *Family Economics Review*. The costs of the food plans were first estimated using prices paid in 1965-66 by households in the South from the USDA's Household Food Consumption Survey with food costs at three selected levels. These prices are updated by use of "Estimated Retail Food Prices by Cities" (Atlanta; Baltimore; Washington, D.C., Maryland, Virginia) released monthly by the Bureau of Labor Statistics.

2/ 10 percent added for family size adjustment. See footnote 3.

3/ The costs given are for individuals in 4-person families. For individuals in other size families, the following adjustments are suggested: 1-person--add 20 percent; 2-person--add 10 percent; 3-person--add 5 percent; 5-or-6-person--subtract 5 percent; 7-or-more-person--subtract 10 percent.

Cost of food at home estimated for food plans at three cost levels, March 1976, Western Region 1/

Sex-age groups	Cost for 1 week			Cost for 1 month		
	Low-cost plan	Moderate-cost plan	Liberal plan	Low-cost plan	Moderate-cost plan	Liberal plan
	Dollars	*Dollars*	*Dollars*	*Dollars*	*Dollars*	*Dollars*
FAMILIES						
Family of 2: 2/						
20-54 years.............	28.20	35.60	43.10	122.30	154.60	186.80
55 years and over.......	25.10	31.10	37.60	108.20	135.20	162.90
Family of 4:						
Couple, 20-54 years and children--						
1-2 and 3-5 years.....	39.70	49.90	60.50	172.40	216.10	261.70
6-8 and 9-11 years....	48.20	60.80	73.70	209.10	263.60	319.30
INDIVIDUALS 3/						
Child:						
7 months to 1 year......	5.40	6.50	8.00	23.40	28.30	34.50
1-2 years...............	6.40	7.90	9.60	27.80	34.20	41.40
3-5 years...............	7.70	9.60	11.70	33.40	41.40	50.50
6-8 years...............	10.00	12.60	15.30	43.50	54.60	66.40
9-11 years..............	12.60	15.80	19.20	54.40	68.50	83.10
Male:						
12-14 years.............	13.40	16.80	20.40	57.90	72.80	88.30
15-19 years.............	14.70	18.50	22.50	63.70	80.30	97.60
20-54 years.............	14.20	18.10	21.90	61.70	78.40	95.00
55 years and over.......	12.50	15.60	18.90	54.00	67.70	81.90
Female:						
12-19 years.............	11.90	14.80	17.90	51.40	64.00	77.40
20-54 years.............	11.40	14.30	17.30	49.50	62.10	74.80
55 years and over.......	10.30	12.70	15.30	44.40	55.20	66.20
Pregnant................	14.10	17.50	21.10	61.10	75.90	91.30
Nursing.................	15.00	18.80	22.60	64.90	81.40	97.80

1/ Assumes that food for all meals and snacks is purchased at the store and prepared at home. Estimates for each plan were computed from quantities of foods published in the Winter 1975 issue of *Family Economics Review*. The costs of the food plans were first estimated using prices paid in 1965-66 by households in the West from the USDA's Household Food Consumption Survey with food costs at three selected levels. These prices are updated by use of "Estimated Retail Food Prices by Cities" (Los Angeles; San Francisco, Oakland) released monthly by the Bureau of Labor Statistics.

2/ 10 percent added for family size adjustment. See footnote 3.

3/ The costs given are for individuals in 4-person families. For individuals in other size families, the following adjustments are suggested: 1-person--add 20 percent; 2-person--add 10 percent; 3-person--add 5 percent; 5-or-6-person--subtract 5 percent; 7-or-more-person--subtract 10 percent.

CONSUMER PRICES

Consumer price index for urban wage earners and clerical workers
(1967 = 100)

Group	March 1976	Feb. 1976	Jan. 1976	March 1975
All items..................	167.5	167.1	166.7	157.8
Food......................	178.7	180.0	180.8	171.3
Food at home.............	177.7	179.6	180.8	171.4
Food away from home......	182.8	181.9	180.9	171.3
Housing...................	174.5	173.8	173.2	163.6
Shelter..................	176.3	176.0	175.9	166.6
Rent..................	142.7	142.1	141.2	135.5
Homeownership..........	188.7	188.6	188.8	178.2
Fuel and utilities.......	178.9	177.9	176.3	163.0
Fuel oil and coal......	247.6	249.4	248.9	228.3
Gas and electricity....	183.7	181.9	179.5	164.0
Household furnishings and operation..........	166.6	165.2	163.7	155.6
Apparel and upkeep.........	145.0	144.0	143.3	140.9
Men's and boys'..........	145.4	143.9	142.6	141.3
Women's and girls'.......	138.5	138.2	138.1	136.1
Footwear................	147.5	146.1	144.7	144.0
Transportation............	159.8	158.5	158.1	144.8
Private.................	158.5	157.2	156.8	144.0
Public..................	172.3	170.4	170.2	152.3
Health and recreation......	160.6	159.7	158.6	151.1
Medical care............	180.6	178.8	176.6	164.6
Personal care...........	157.4	157.0	155.7	148.9
Reading and recreation...	149.0	148.5	148.2	142.0
Other goods and services.	151.8	151.3	150.5	146.5

Source: U.S. Department of Labor, Bureau of Labor Statistics.

Index of prices paid by farmers for family living items
(1967 = 100)

Item	Mar. 1976	Feb. 1976	Jan. 1976	Mar. 1975	Feb. 1975	Jan. 1975
All items..................	184	183	183	173	175	173
Food and tobacco..........	181	---	---	176	---	---
Clothing..................	---	193	---	---	182	---
Household operation........	---	---	188	---	---	168
Household furnishings......	---	---	161	---	---	149
Building materials, house..	192	---	---	183	---	---

Source: U.S. Department of Agriculture, Statistical Reporting Service.

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