

# Changing Home Food Production and Preservation Patterns

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**A**merican households have responded to rising food costs with garden shovels and freezer bags.

Home food production and home freezing increased from 1964 to 1976, while participation in home canning shifted among types of households. In addition to high food costs, changes in the labor force and other economic factors may have been responsible for this trend.

The Nationwide Food Consumption Survey (NFCS) of 3,500 households (those with at least one member having 10 or more meals prepared at home during the week preceding the interview) was conducted by USDA in the spring of 1977. Trends in home food production and preservation were identified by comparing household practices with a similar survey in 1965 (6,200 households). Respondents were asked if the household had engaged in home food production and preservation practices during the previous year. Although these data were collected for all four seasons in the latest NFCS, the 1965 survey collected data only during the spring.

## Home Produced Food

Home produced food was defined as that raised for home use or obtained by hunting and gathering from the wild. One out of two surveyed households produced food at home in 1976, compared with one out of three households in 1964. Most of the increase in home food production appears to have been associated with vegetable gardening. Forty-three percent of the households produced tomatoes in 1976, compared with 27 percent in 1964, while the percentage of households producing animal products such as eggs, milk, or meat for home use decreased from 10 to 7 percent.

Between 1964 and 1976, home food production by households in various income categories shifted considerably. Though income information obtained for 1976 is not directly comparable with that of 1965, according to the 1976 survey, higher income households were more likely to produce food for home use.

For the purpose of comparing home food production and preservation practices at different income levels, the total number of households reporting income in each of the two years were divided into five groups, according to similar proportions of the distribution of income (see tables). Much of the increase in the numbers of home producers occurred among the middle- and upper-income groups. In the lowest income levels, there was actually a reduction in the percent of home food produced, from 43 to 35 percent. Higher food costs may have motivated the higher income households to plant gardens, and their larger incomes would make garden costs (land, tools, etc.) more affordable.

The percentage of households producing foods for home use increased in each region of the United States between 1964 and 1976. In the South, an increase of 7 percentage points was observed compared with about a 16 percentage point increase in the other regions.

As anticipated, the incidence of home food production decreased with the degree of urbanization. In 1976, a household in a nonmetropolitan area was twice as likely to produce foods for home use as households in central cities. About 50 percent of households in suburban sections of metropolitan areas reported having produced food for home use.

One-fourth of U.S. households surveyed reported home consumption of fish from noncommercial sources. Below average ratios, about 15 percent, were found for households in the lowest income levels, in the Northeast, and in central cities. The percentage of households catching fish for use at home ranged from 24 to 32 percent in other income, regional, and urbanization categories.

## Home Preserved Food

The increasing number of households producing food for home use between 1964 and 1976 was accompanied by a major increase in the proportion of households reporting home freezing of foods. The percentage of households engaged in freezing activities more than doubled, increasing from 24 to 55 percent. The percentage of

households canning foods remained the same at about 35 percent. Availability of freezers in the home (a combination refrigerator-freezer is considered a separate freezer if the freezer section is completely sealed off from the refrigerator space), ease in preparing food for freezing, and difficulty in obtaining canning supplies may have accounted for the surge in popularity of home freezing over canning.

Home freezing has shifted among the income groups since 1964, when more middle-income households were freezing food than those at the extremes of the income range. In 1976, however, the proportion of households reporting freezing activities increased with income. The shift to higher income households may be accounted for by rising food cost as well as a wider variety of refrigerator-freezers. Freezer ownership has risen 57 percent since

1964. The cost of a freezer may deter home freezing for low-income households.

Regional differences in the percentage of households freezing foods for home use has decreased. In 1964, use of freezing for all foods ranged from 13 percent in the Northeast to 30 percent in the North Central region. The new survey displayed a range from 52 percent in the West to 59 percent in the North Central region.

### Households Producing Food for Home Use

	Vegetables, fruit																
	Any food		Any		Potatoes, sweet potatoes		Tomatoes		Other vegetables		Melons		Other fruit		Animal products		Caught fish <sup>1</sup>
	1964	1976	1964	1976	1964	1976	1964	1976	1964	1976	1964	1976	1964	1976	1964	1976	1976
	Percent																
<b>Income<sup>2</sup></b>																	
All groups <sup>3</sup>	34	47	32	46	11	15	27	43	26	39	6	8	14	16	10	7	25
Group one	43	35	40	34	20	13	35	30	36	28	8	5	18	13	19	6	15
Group two	36	41	33	40	14	14	28	37	29	36	6	8	14	12	14	7	24
Group three	32	50	31	49	9	17	27	46	25	40	5	9	15	15	8	7	26
Group four	29	54	28	53	6	16	22	49	20	44	4	10	13	19	4	6	29
Group five	31	56	29	55	4	13	23	51	18	44	3	11	13	22	6	8	31
<b>Region</b>																	
Northeast	21	39	20	39	4	7	18	37	15	30	2	4	8	9	3	2	15
North Central	40	55	39	54	14	19	35	53	33	47	5	12	18	17	11	8	28
South	40	47	38	47	17	22	32	42	32	41	9	10	15	14	17	10	30
West	29	45	27	44	4	9	15	36	15	35	4	7	18	25	6	6	24
<b>Urbanization<sup>4</sup></b>																	
Central city		30		30		4		26		22		3		8		1	16
Suburban		50		50		11		45		40		10		18		5	25
Nonmetropolitan		60		58		29		55		52		12		20		14	32

<sup>1</sup>Information concerning households catching fish for home use was only obtained in the 1977-78 NFCS.

<sup>2</sup>Income groups:

Group	1964		1976	
	Percent of sample	Income after tax	Percent of sample	Income before tax
One	22	Under \$3,000	22	Under \$6,000
Two	20	\$3,000-4,999	18	\$6,000-9,999
Three	25	\$5,000-6,999	27	\$10,000-16,800
Four	21	\$7,000-9,999	22	\$16,801-26,000
Five	12	Over \$10,000	12	Over \$26,001

<sup>3</sup>Includes those households not reporting income information.

<sup>4</sup>Urbanizations in 1976 are not comparable to those in 1964.

Source: USDA Nationwide Food Consumption Survey 1977-78, 48 conterminous States, spring 1977 (preliminary).

Although there was little change in the proportion of households canning foods for home use between 1964 and 1976, there were internal shifts in the types of households engaged in canning activities. As with home food production, home canning of food shifted from predominantly lower income households to those households in higher income groups in 1976. At the lowest income level for the earlier survey, 44 percent of the households reported home canning. At the upper end of the income scale, 25 percent of the households were canning foods. In 1976, the frequency of home canning was greater among middle- and upper-income

households than among the lowest income group. The percentage of the lowest income households reporting food canning dropped by one-third during the 12-year period.

Regional differences measured in percentage points showed only limited differences between the two years. The Northeast continued to lag behind the other regions in 1976, having only 25 percent of households reporting canning operations compared with about 40 percent in other regions.

**Characteristics of the Female Head**  
Age, education, and employment of the

female head of the household (defined as the adult female in the household regardless of marital status) appears to influence the household's participation in home food preservation. Households with a female head under 25 or over 65 years of age were less likely to freeze foods for home use than those with female heads age 25 to 65 in 1964 and 1976. In 1964, the percentage of households canning food for home use increased with the age of the female head through 45 years and tended to level off thereafter to about 40 percent. In the recent survey, associations with age appear to be less well defined. Home canning rates among female

**Households Canning and Freezing Food for Home Use**

	Households canning												Households freezing											
	Any food		Vegetables Pickles relishes				Other		Any		Fruit Jellies, jams, preserves		Other		Meat poultry, fish, game		Any		vege- tables		Fruit or berries		Meat, poultry, fish, game	
	1964	1976	1964	1976	1964	1976	1964	1976	1964	1976	1964	1976	1964	1976	1964	1976	1964	1976	1964	1976	1964	1976	1964	1976
	Percent																							
<b>Income<sup>1</sup></b>																								
All groups <sup>2</sup>	34	37	24	29	17	22	19	22	29	28	25	25	19	16	2	3	24	55	18	39	16	30	15	40
Group one	44	29	32	23	22	16	26	19	38	23	32	21	27	14	3	2	20	37	17	27	13	19	13	23
Group two	36	34	28	27	20	21	22	19	31	25	26	22	22	16	2	3	23	51	19	36	16	25	16	36
Group three	34	40	24	32	17	23	19	25	29	30	26	26	17	17	2	2	27	59	20	42	19	31	17	47
Group four	29	40	19	31	13	25	14	21	25	29	22	26	14	17	1	3	26	66	18	47	17	36	15	49
Group five	25	40	16	26	12	22	11	20	21	33	19	30	11	15	1	4	24	67	16	42	17	36	16	52
<b>Region</b>																								
Northeast	21	25	15	20	10	15	12	13	17	17	14	15	11	6	1	1	13	56	9	31	9	21	7	49
North Central	39	42	30	36	21	26	24	30	33	30	28	27	24	18	3	4	30	59	21	43	21	36	20	40
South	40	43	29	35	22	27	23	26	34	32	30	29	19	17	2	2	28	53	25	45	18	32	17	35
West	32	39	16	23	11	18	10	17	29	35	27	31	19	23	2	5	22	52	12	34	14	27	15	39

<sup>1</sup>Income groups:

Group	1964		1976	
	Percent of sample	Income after tax	Percent of sample	Income before tax
One	22	Under \$3,000	22	Under \$6,000
Two	20	\$3,000-4,999	18	\$6,000-9,999
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Source: USDA Nationwide Food Consumption Survey 1977-78, 48 conterminous States, spring 1977 (preliminary).

heads over 65 years, however, held at around 40 percent.

The pattern of home food preservation by educational level of the female head has shifted between the two time periods. Households where the female head has a college education increased home freezing activities from 23 percent in 1964 to 62 percent in 1976. In the lowest educational group, home freezing increased from 22 to 49 percent. More households with higher educated female heads also participated in home canning in 1976 as compared with 1964. In 1964, there was an inverse relationship between educational attainment and percent

of households canning. In the group with a female head completing elementary school or less, 42 percent of the households reported food canning. In contrast, only 27 percent of the households with a female head who was a college graduate canned food for home use. By 1976, increasing proportions of households where the female head had completed high school or further were reporting home food canning at roughly 40 percent.

Employment of the female head outside of the home appears to influence her household's canning rather than freezing practices. In both surveys, employment outside the home refers to employment of 35 or

more paid hours per week and does not include volunteer work. Little difference was evident in either 1964 or 1976 in the proportion of households engaged in freezing activities based on the employment status of the female head. The female head's employment status continues to deter home canning activities. Where the female head is employed, the percentage of households canning was 9 percentage points less than in households where the female head is not employed. ■

The author is a home economist with USDA's Science and Education Administration.

### Households With a Female Head Canning and Freezing Food for Home Use

	Households canning														Households freezing									
	Any food		Vegetables Pickles relishes				Other				Fruit Jellies, jams, preserves				Meat poultry, fish, game		Any food		vege- tables		Fruit or berries		Meat, poultry, fish, game	
	1964	1976	1964	1976	1964	1976	1964	1976	1964	1976	1964	1976	1964	1976	1964	1976	1964	1976	1964	1976	1964	1976	1964	1976
Percent																								
<b>Age</b>																								
Under 25	16	21	11	17	6	11	9	13	12	16	11	13	8	9	1	1	15	42	9	26	6	15	9	33
25-34	28	34	20	27	14	19	16	20	23	25	21	22	13	12	2	2	23	58	17	40	14	29	15	46
35-44	34	37	25	28	19	22	19	20	29	28	25	25	19	14	2	3	29	60	22	42	21	31	19	45
45-54	39	48	28	39	20	29	22	30	33	36	28	32	21	20	3	4	30	65	23	46	22	38	19	47
55-65	42	45	28	37	21	29	22	28	38	35	33	32	26	21	3	4	26	63	20	50	18	37	16	45
Over 65	41	42	29	32	18	23	22	26	36	34	31	30	25	22	2	1	16	46	12	35	10	28	8	27
<b>Education</b>																								
Elementary or less	42	44	32	36	21	25	27	27	36	34	31	29	26	22	3	2	22	49	18	40	15	28	14	30
Some high school	37	37	26	29	19	23	21	22	31	27	27	24	21	16	2	2	26	53	22	38	17	26	16	39
Completed high school	31	38	22	32	15	24	16	25	26	28	23	26	15	17	2	3	26	60	19	44	18	33	16	46
Some college	29	39	18	27	13	21	12	21	27	32	24	28	16	14	2	4	24	59	17	41	16	33	15	43
College graduate or more	27	40	16	28	14	22	8	18	23	30	22	27	11	14	1	2	23	62	16	40	17	35	12	46
<b>Employment</b>																								
Employed <sup>1</sup>	30	33	20	25	14	20	15	18	25	25	22	23	15	12	2	3	23	57	17	38	16	29	14	42
Not employed	36	42	26	33	19	25	21	26	31	32	27	28	21	19	2	3	25	58	19	42	17	32	16	42

<sup>1</sup>Employed outside of the home refers to employment of 35 hours or more for pay during the past 7 days and does not include volunteer work outside the home for which the woman is not paid.

Source: USDA Nationwide Food Consumption Survey 1977-78, 48 conterminous States, spring 1977 (preliminary)