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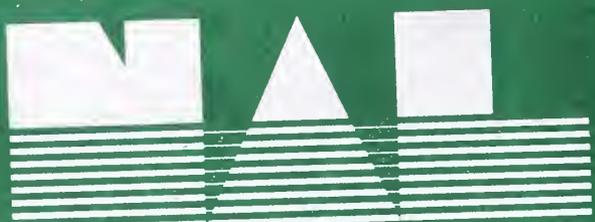
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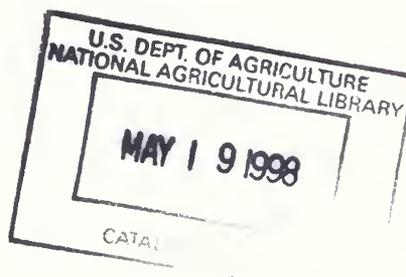
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HIRED FARMWORKER HOUSING

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ABSTRACT

The typical home of a hired farmworker, compared with a rural farm and nonfarm home, was more likely to have fewer rooms, be part of a multiunit structure (although most were single-unit structures), and be connected to a potable water source and a sanitary sewage system. Farmworkers' homes had lower estimated resale values and rented for less than did rural nonfarm homes but hired farmworker housing were about as likely to have complete plumbing facilities as were rural farm homes. Temporary housing available for migrant workers was typically less desirable than permanent farmworker housing.

Keywords: Housing, Farmworker, Farm, Rural Nonfarm, Migrant Labor

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HIGHLIGHTS

Housing conditions of hired farmworkers were about as good as--and in some ways better than--those of rural farm persons and were slightly inferior to those of rural nonfarm persons.

Ninety-one percent of hired farmworker housing had complete plumbing facilities; which was about the same as for rural farm housing (92 percent) but a little less than for rural nonfarm housing (94 percent). Houses rented by hired farmworkers lacked complete plumbing much more often than did homes that they owned.

Hired farmworker homes were connected to potable water sources and sanitary sewage disposal systems more often than were rural farm homes and about as often as were rural nonfarm homes. Owner-occupied homes for hired farmworkers were connected to water and sewer systems more often than were their rented homes.

Hired farmworkers lived in small houses (those with 4 rooms or less) more often than did rural farm occupants and about as often as did rural nonfarm residents. Homes rented by hired farmworkers were generally smaller than owner-occupied homes. Hired farmworker's homes rented for less and were valued below those of nonfarm households.

For hired farmworkers, as with other persons, good housing was related to higher family incomes. Over 90 percent of the hired farmworker households having incomes above \$5,000 occupied housing with complete plumbing facilities; only three-fourths of the poorer households occupied such housing.

The housing situation of hired farmworkers varied considerably by whether that farm employment was full-time or part-time. Only one-fourth of all hired farmworkers were full-time farmworkers; they were more often renters and were better housed than were part-time farmworkers.

Migrant workers occupied only 135,000 of the 2 million hired farmworker housing units. Vacant housing units available for migrant workers were usually smaller and less desirable than other farmworker housing: 52 percent were a single room, 75 percent lacked complete plumbing, more than 28 percent were unheated, but 84 percent were connected to public sewers or septic tanks.

HIRED FARMWORKER HOUSING

Ronald Kampe*

INTRODUCTION

Housing plays an important role in attracting and holding farmworkers that are needed to produce the livestock and crops consumed in our society. However, it is generally believed that farmworker housing is inferior to other rural farm or nonfarm housing. In fact, the Farmers Home Administration in addition to its general housing credit program available to rural families, including farmworkers, has two programs designed specifically for farmworkers; (1) Farm labor housing loans and (2) Farm labor housing grants. 1/

These two programs, aimed at housing in farm labor camps and other rental housing for farmworkers, testify to the general concern for the quality of farm labor housing. However, the lack of supportive data on condition of farmworker housing prompted the addition of a special housing survey in the annual survey of the hired farm workforce in December 1975. 2/

This report summarizes the special farmworker housing survey, and compares hired farmworker housing to rural farm and rural nonfarm housing. 3/ It is not a report on temporary housing used by migrant workers as they travel from place to place doing farmwork. Rather, it is a report on the residence where the worker lived at the time of the survey. However, because of the interest in migrant housing, an analysis of vacant housing held for migrant workers was also included in this report.

Although farmworker housing was compared to rural farm and nonfarm housing in this study, the comparisons did not deal with completely separate housing groups. Most hired farmworker housing was assumed to be rural and thus a subgroup of rural farm or rural nonfarm housing. However some hired farmworker housing was probably located in urban areas and was not a part of either rural housing group. But because of the rural nature of farm life and work, comparing hired farmworker housing to rural farm and nonfarm housing seemed most appropriate.

Estimates in this report relative to hired farmworker housing are based on data obtained in December, 1975 from supplementary questions in the Current Population Survey of the U.S. Bureau of the Census.

Rural farm and nonfarm housing estimates were based on the 1975 Annual Housing Survey and estimates on vacant housing used by migrant farmworkers were based on the

* Economist, Housing Program Area; Economic Development Division; Economics, and Statistics Service.

1/ Agriculture and Related Agencies Appropriation Bill, 1978 Report No. 95-384, pp 61 and 63.

2/ This survey was conducted for the Economic Research Service, USDA, by the Bureau of the Census as a supplement to the December 1975 Current Population Survey. The survey on hired farmworker housing was conducted only once and was not repeated annually as was other farmworker data. Because 1975 housing data used in this study is the most recent data available and because housing conditions change slowly, comparisons based on 1975 data are still considered meaningful.

3/ "Rural", as used here, is the Census definition. It includes areas not classified as urban -- mainly sparsely populated areas and places with less than 2,500 population.

1976 Annual Housing Survey. Both surveys were sponsored by the U.S. Department of Housing and Urban Development and conducted by the U.S. Bureau of the Census.

Because data in this report were from sample surveys, they are subject to sampling and nonsampling error (see appendix A for reliability of estimates). Comparison statements in the text, but not all data in tables, are statistically significant at the 1.6 standard errors (90 percent) level unless otherwise indicated.

HIRED FARMWORKER HOUSEHOLDS

Rowe and Smith reported there were 2.6 million persons 14 years of age and over who did some farm work for wages or salary during 1975. ^{4/} They resided in 2 million different housing units averaging 1.3 farmworkers per housing unit (table 1). But there are many types of hired farmworkers.

Table 1--Hired farmworkers and housing units, 1975 ^{1/}

Type of farmworker and days worked	Hired farmworkers		Housing units		Workers per housing unit
	1,000 units	Percent	1,000 units	Percent	Number
Full-time workers:					
150 to 249 days	228	39.1	190	37.0	1.2
250 days or more	355	60.9	324	63.0	1.1
Total	583	100.0	514	100.0	1.1
Part-time workers:					
Less than 25 days	1,180	57.4	860	57.4	1.4
25 to 149 days	875	42.6	637	42.6	1.4
Total	2,055	100.0	1,497	100.0	1.4
All workers	2,638		2,011		1.3

^{1/} A housing unit is occupied by a household.

While some farmworkers were employed full-time many were seasonal or part-time workers who did a little farmwork to supplement nonfarm incomes. In this study, full-time farmworker households were those in which at least one household member was employed 150 days or more on a farm; all other hired farmworker households were defined as part-time. ^{5/} Sixty-three percent of full-time farmworker households had a member who worked 250 days or more on a farm. Conversely, 57 percent of part-time farmworker households had a member who worked fewer than 25 days on a farm. One fourth of the hired farmworker housing was classified as full-time hired farmworker housing and three fourths as part-time hired farmworker housing.

Farmworker housing was further classified by head of household status, because many farmworkers (teenagers, wives, or older family members) are not heads of their households and therefore probably not the primary household income earner. In only

^{4/} Rowe, Gene, and Leslie Whitener Smith, The Hired Farm Working Force of 1975, HEC Report No. 355.

^{5/} A household is all those persons who occupy a single housing unit.

half of the 2 million hired farmworker households was the household head the farmworker (table 2). And in only one of five hired farmworker households was the hired farmworker both head of the household and a full-time farmworker.

Table 2--Hired farmworker's positions in households, 1975

Position in household	:	:	Households <u>1/</u>
		1,000 units	Percent
Full-time employment:	:		
Head of household	:	394	19.6
Not head of household	:	120	6.0
Subtotal	:	514	25.6
Part-time farm employment:	:		
Head of household	:	609	30.3
Other	:	888	44.1
Subtotal	:	1,497	74.4
Total	:	2,011	100.0

1/ Households equals housing units.

The importance of hired farmwork to the households in the three other hired farmworker groups (full-time but not head, part-time and head, and part-time but not head) was probably not as great as where the hired farmworker was also the head of household. Hired farmwork for these three other groups generally only supplemented other household incomes.

The largest category of hired farmworker households (44 percent of the total) worked only part-time for farm wages. Households in which a teenager or wife worked on a farm during the harvest season, while the household head did other type of work, were part of this group.

In the second largest group of hired farmworker housing (30 percent of the total) the head of the household was a part-time hired farmworker. Households in which the head worked full-time at another job and supplemented that income with part-time hired farmwork were part of this group.

Households in which the farmworker was not head of household but worked full-time on a farm were the smallest group (6 percent of the total). A part of this group were households in which a son lived at home and worked full-time on a farm in the community.

Hired farmworkers were also classified according to tenure as there are frequent differences in the housing typically occupied by owner and renter occupants. The difference in tenure is treated as a characteristic of the housing unit in the next section of this paper.

All the above classifications were useful to determine what types of farmworkers occupy hired farmworker housing. But to analyze all these various combinations of housing groups would spread the hired farmworker housing sample into too many small groups for statistically reliable estimates. Therefore, this study is limited to a comparison of owner- and renter-occupied hired farmworker housing with the same

breakdowns of rural farm and rural nonfarm housing, and with a separate comparison of full-time and part-time hired farmworker housing. ^{6/} The full-time and part-time hired farmworker housing comparison data appear in appendix B tables.

HIRED FARMWORKER HOUSING

Hired farmworker households rented their homes more often than did either farm or nonfarm households. Forty-two percent of hired farmworker homes are rented, a much larger proportion than the 18 percent for rural farm and 23 percent for rural nonfarm housing (table 3).

Table 3--Tenure status in rural housing, 1975

Tenure	Hired farmworker		Rural farm		Rural nonfarm	
	1,000 units	Percent	1,000 units	Percent	1,000 units	Percent
Owner occupied	1,174	58.4	2,154	81.5	13,607	77.4
Renter occupied	837	41.6	490	18.5	3,979	22.6
Total	2,011	100.0	2,644	100.0	17,586	100.0

Much of the high proportion of hired farmworkers who rent results from many farmworkers living in homes provided rent free by farmers. Full-time hired farmworkers who were heads of their households rented their homes the most often--68 percent were renters, and nearly two-thirds of these renter households paid no cash rent (appendix B table 1).

Over half of the households headed by a part-time hired farmworkers were also rented. However, fewer than 25 percent of these homes were occupied free of rent.

Households in which the head was not a farmworker, but which had a hired farmworker member, owned their home with about the same frequency as did all rural nonfarm households (75 percent and 77 percent respectively). And it made little difference whether the nonhead farmworker was full-time or part-time. Also, there was no significant difference between full-time and part-time farmworker housing in the percent occupied by "no cash" renters (6 to 7 percent).

Type of Structure

Site-built single family units were the most common type of housing occupied by hired farmworkers. Eighty-two percent of the hired farmworkers were housed in this type of housing; 10 percent lived in mobile homes and 8 percent in multiple-unit structures (table 4). The latter two percentages are not significantly different at the 90-percent level.

^{6/} Data on rural farm and nonfarm housing were tabulated from the Annual Housing Survey, 1975, sponsored by the Department of Housing and Urban Development and conducted by the Bureau of the Census.

Hired farmworkers occupied site-built single family structures more often than did rural nonfarm households but less often than did rural farm occupants. Mobile homes were used the most by rural nonfarm households (13 percent), somewhat less by hired farmworkers households (10 percent), and least by rural farm households (5 percent). Multiple-unit structures were used by 8 percent of hired farmworkers and rural nonfarm households and rarely by rural farm households.

Table 4--Types of structures in rural housing, 1975

Item	Hired farmworker	Rural farm	Rural nonfarm
	<u>Percent</u>		
Owner occupied:			
One family (site-built)	88.1	94.8	84.3
One family (mobile home)	11.2	4.7	14.3
Multiple-unit	.7	.5	1.4
Total	100.0	100.0	100.0
Renter occupied:			
One family (site-built)	73.8	91.4	66.5
One family (mobile home)	8.2	5.3	9.1
Multiple-unit	18.0	3.3	24.4
Total	100.0	100.0	100.0
Total occupied:			
One family (site-built)	82.2	94.2	80.3
One family (mobile home)	9.9	4.8	13.1
Multiple-unit	7.9	1.0	6.6
Total	100.0	100.0	100.0

The site-built single-family unit is the most typical unit rented by hired farmworker households. But, compared to owners, hired farmworker households who rent live less often in site-built single-family homes and mobile homes, and more often in multiple-unit structures.

Whether full-time or part-time, hired farmworkers who were heads of households were more likely to live in mobile homes than were hired farmworkers who were not heads of households (appendix B table 2). Part-time hired farmworkers lived in multiple unit structures more often than did full-time hired farmworkers.

Number of rooms

The number of rooms in a house is often an indication of its adequacy relative to total living space. Other things equal, houses with few rooms are generally less desirable than those with many rooms. Rural farm homes had five or more rooms more often than did hired farmworker homes (84 percent versus 69 percent) (table 5). This may reflect the large traditional farm houses that still exist on many farms. However, hired farmworker housing was about equal in size to rural nonfarm housing. Owner-occupied hired farmworker housing typically had more rooms than did the renter-occupied. Eighty-three percent of owner-occupied farmworker housing had five or more rooms compared to 49 percent of renter-occupied housing. And the homes of hired farmworkers who were heads of households were smaller than those of hired farmworkers who were not heads of households (appendix B table 3).

Table 5--Proportion of rural housing with five or more rooms

Tenure	Hired farmworker	Rural farm	Rural nonfarm
		<u>Percent</u>	
Owner occupied	83.1	87.7	77.6
Renter occupied	49.2	70.6	47.3
Total occupied	69.0	84.5	70.8

Plumbing

Completeness of plumbing facilities is often used as an indicator of adequate housing quality. ^{7/} Based on this quality standard, hired farmworker housing was as good as rural farm housing but not as good as rural nonfarm housing. Ninety-one percent of hired farmworker units had complete plumbing compared to 92 percent of rural farm homes (not significantly different at the 90 percent level) and 94 percent of rural nonfarm units (table 6). However, if only owner occupied housing is considered, hired farmworker housing was of better quality than rural farm housing.

Table 6--Proportion of rural housing with complete plumbing, 1975

Tenure	Hired farmworker	Rural farm	Rural nonfarm
		<u>Percent</u>	
Owner occupied	96.9	94.3	96.0
Renter occupied	83.4	80.2	87.6
Total occupied	91.3	91.7	94.1

The homes of hired farmworker renters lacked complete plumbing more often than did those of owner-occupants. Rural nonfarm rental housing had complete plumbing more often than did rented hired farmworker housing--which in turn had complete plumbing more often than did rented rural farm housing.

Housing owned and occupied by full-time hired farmworkers was similar to part-time hired farmworker housing in adequacy of plumbing (appendix B table 4). However, there was a marked difference between full-time and part-time farmworkers who rented; especially where the farmworkers were heads of their households. In this group, 11 percent of the full-time hired farmworkers lived in homes with incomplete plumbing compared with 22 percent of part-time hired farmworkers.

^{7/} A housing unit has complete plumbing when it has for the exclusive use of the occupants: (1) both hot and cold piped water, (2) a flush toilet, and (3) a bathtub or shower, all inside the structure.

Water Source

Water for rural housing comes mainly from individual wells and private or public water companies; these are generally considered to be the most potable (i.e. healthful) water sources.

Hired farmworker homes, whether owner or renter occupied, were connected to an adequate water source more often than were either owned or rented rural farm or nonfarm homes (table 7). Hired farmworker housing was connected to individual wells or private or public water systems 96 percent of the time; versus 90 percent for rural farm homes and 95 percent for nonfarm housing (the latter percent is not significantly different from hired worker housing at the 90 percent confidence level). Owner occupied homes were connected to approved water sources more often than were renter-occupied units--hired farmworker or rural nonfarm. Although owner occupied rural farm housing also appeared to be connected to approved water sources more often than was renter housing, the difference was not significant at the 90 percent level.

Table 7--Proportion of rural housing connected to a potable water source

Tenure	:	Hired Farmworker	:	Rural farm, 1976	:	Rural nonfarm, 1976 <u>1/</u>
	:		:	Percent	:	
Owner occupied	:	97.0	:	90.9	:	95.6
Renter occupied	:	94.5	:	88.2	:	92.9
Total occupied	:	96.0	:	90.4	:	95.0

1/ Data not available for 1975.

Sewage Disposal

Public sewers or septic tanks are generally considered to be the only adequate methods of disposing of residential sewage. As with water sources, approved sewer systems were connected to hired farmworker housing more often than to rural farm or nonfarm housing. And the owner-occupied rates for hired farmworker and all rural nonfarm housing were essentially the same (table 8).

Table 8--Proportion of rural housing connected to a sanitary sewage system

Tenure	:	Hired farmworker	:	Rural farm, 1976 <u>1/</u>	:	Rural nonfarm, 1976 <u>1/</u>
	:		:	Percent	:	
Owner occupied	:	98.3	:	96.3	:	97.5
Renter occupied	:	97.0	:	85.6	:	90.8
Total occupied	:	97.8	:	94.4	:	96.0

1/ Data not available for 1975.

Owner-occupied housing was generally more likely to be connected to an approved sewer system than was renter-occupied housing. But an exception was hired farmworker

housing for which the likelihood of an adequate sewer system was about the same for owner and renter occupants. Data suggest that the lack of an approved sewer system was more often a rural farm problem, and to a lesser extent a hired farmworker or rural nonfarm problem.

Value and Rent

Property values and rental rates reflect housing quality. ^{8/} The median value of owner-occupied hired farmworker housing in 1975 was \$23,300, 13 percent below the \$26,800 median for rural nonfarm housing (table 9). Differences in median rents were much greater. The median monthly rent of renter occupied rural nonfarm homes was \$133 compared to less than \$100 for hired farmworker housing.

Table 9--Value and gross rent distribution of farmworker
and rural farm housing 1975, ^{1/}

Value and rent	:	Hired farmworker	:	Rural nonfarm
	:		:	
	:		<u>Percent</u>	
Value:	:			
Under \$5,000	:	6.5		3.2
\$5,000-\$9,999	:	11.3		8.8
\$10,000-\$19,999	:	26.7		22.4
\$20,000-\$29,999	:	16.4		23.2
\$30,000 or more	:	39.1		42.4
Total	:	100.0		100.0
Median	:	\$23,300		\$26,800
Rent:	:			
Under \$100	:	36.2		25.1
\$100-\$199	:	22.6		43.4
\$200-\$299	:	2.7		13.1
\$300 or more	:	1.2		3.2
No cash rent	:	37.3		15.2
Total	:	100.0		100.0
Median	:	<\$100		\$133

^{1/} Value is the respondent's estimate of how much an owned house and lot would sell for if it were for sale. Values are shown on only one-family homes on less than 10 acres without a commercial establishment on the property. Cooperatives, condominiums, mobile homes and trailers are excluded. Gross rent is the agreed upon rent plus an estimate for utilities (electricity, gas, water) and fuel if included in the agreed upon rent. Rent statistics exclude one-family houses, mobile homes and trailers on 10 acres or more. No cash rent is tabulated separately.

^{8/} Other factors are also reflected in the value of a home. The size and type of structure, the number, size and type of rooms, the size of the lot and other factors arising from locational considerations also influence values and rents. Although most of these other factors could not be measured, there was some control on the value of land since value and rental comparisons were limited to housing on tracts of less than 10 acres.

The median value of full-time hired farmworker housing was not significantly different than that of part-time hired farmworker housing (appendix B table 5). And median rents paid by both full-time and part-time farmworker households who paid cash rent were both less than \$100 per month.

Hired farmworkers occupied "rent free" housing more often than did rural nonfarm households. Many farmers provided housing for hired farmworkers as added compensation and as an inducement to live close to the farming operation. Of hired farmworkers who rented, 61 percent of the full-time and 24 percent of the part-time, occupied "rent free" housing, compared with only 15 percent of rural nonfarm renters.

Income Effect on Housing Quality

People with higher incomes generally live in better homes than do people with lower incomes. In this section, housing quality, as measured by completeness of plumbing, was compared across categories of household income. Whether the housing was occupied by hired farmworkers, rural farm or nonfarm occupants and whether owned or rented, the higher the income the more likely it is that the household lived in a home with complete plumbing. Hired farmworker housing compared favorably with rural farm and nonfarm housing in each of three income classes. Also, owner occupants were better housed than renters, especially where household incomes were less than \$10,000. Seven of eight hired farmworker households who were owner occupants, but earned less than \$5,000 yearly, lived in homes with complete plumbing; the same as for rural farm and nonfarm occupants with similar incomes (table 10).

Table 10--Completeness of plumbing by household income of rural households, 1975

Income and tenure	:	Hired farmworker	:	Rural farm	:	Rural nonfarm
	:	<u>Percent</u>			:	
Income less than \$5,000:	:					
Owner occupant	:	86.7		86.7		88.5
Renter occupant	:	68.2		57.8		75.1
Income \$5,000-\$9,999:	:					
Owner occupant	:	97.7		94.7		95.6
Renter occupant	:	92.7		90.7		89.9
Income \$10,000 and over:	:					
Owner occupant	:	99.6		98.4		99.0
Renter occupant	:	97.1		94.2		96.5

Owners with incomes over \$5,000 lived in homes with complete plumbing much more often than did those with incomes under \$5,000. At least 95 percent of owner-occupied hired farmworker, rural farm and rural nonfarm households earning \$5,000 to \$9,999 had homes with complete plumbing. And a still larger proportion of households with incomes of \$10,000 or over lived in homes with complete plumbing.

Within each income category, renters were less likely than owners to live in a home with complete plumbing. In fact, only 58 percent of rented farm homes, whose occupant had an income of less than \$5,000, had complete plumbing. This compared to 68 percent for corresponding hired farmworker homes and 75 percent for rural nonfarm homes.

Although full-time hired farmworker housing had complete plumbing more often than did that of part-time hired farmworkers (appendix B table 6) these differences were not significant at the 90 percent level. However, whether the hired farmworkers worked full-time or part-time, or whether they were owner occupants or renters, households with incomes over \$5,000 were more likely to live in a home with complete plumbing than were those with incomes under \$5,000.

MIGRANT FARMWORKER HOUSING

Migrant farmworkers represent a very small proportion of the farm labor workforce. In 1975, 188,000 of the 2.6 million hired farmworkers were migrant workers. They were part of 135,000 households, or about 7 percent of all farmworker households. A migrant hired farmworker household was defined as one in which a household member had to leave his or her permanent home to do hired farmwork in a different county, stay at least one night, and eventually return to his or her permanent home or a household with no permanent address where someone in the household did hired farmwork in at least two counties.

About two-thirds of migrant hired farmworker households were classified in this study as part-time farmworker households and 58 percent of these were households where the hired farmworker was someone other than the head of the household (table 11). In the one-third that were classified as full-time migrant hired farmworker households, the farmworker was almost always (93 percent of the time) head of the household.

Table 11--Migrant hired farmworker households by worker's position in household 1975

Worker's position in household	Part-time		Full-time		Total	
	<u>1,000</u>	<u>Percent</u>	<u>1,000</u>	<u>Percent</u>	<u>1,000</u>	<u>Percent</u>
Head	39	42.4	40	93	79	58.5
Other household member	53	57.6	3	7	56	41.5
Total	92	100.0	43	100	135	100.0

Seventy-five percent of the migrant hired farmworker households were "white" (not including Hispanics). The remainder were about equally likely to be either Hispanic or Black and other races (table 12). Migrant hired farmworkers who were either "white" or Hispanic were mainly part-time migrant workers while Blacks and all others were usually full-time worker households.

The sample of the hired farmworker survey was too small to give reliable data on the quality of housing occupied by migrant hired farmworker. Nor did it obtain information on the quality of housing occupied by migrant households while they were away from their permanent homes. However, a profile on the type and quality of vacant housing used by migrant workers was obtained from the 1976 Annual Housing Survey. ^{8/} These data show that 52 percent of the vacant migrant worker housing units had only one room. Only one-third had complete plumbing but 84 percent were serviced by public

^{8/} Annual Housing Survey, 1976, sponsored by the Dept. of Housing and Urban Development and conducted by the Bureau of the Census.

Table 12--Migrant hired farmworker households by ethnic origin, 1975

Ethnic origin	Part-time		Full-time		Total	
	1,000	Percent	1,000	Percent	1,000	Percent
White, not Hispanic	76	82.6	25	58.2	101	74.8
Hispanic	12	13.0	5	11.6	17	12.6
Black and others	4	4.4	13	30.2	17	12.6
Total	92	100.0	43	100.0	135	100.0

sewers or septic tanks (the rest had only privies). Water came almost exclusively from public water systems or wells. There was no heating equipment in 28 percent of the units and those that had it were mainly equipped with room or space heaters (table 13). The data further show that 61 percent of the vacant houses used for migrant farmworkers were site-built single unit structures, 9 percent were in two unit structure, and 30 percent in structures having three or more units. Mobile homes were not generally held for migrant workers.

Table 13--Vacant housing used for migrant farm labor

Item	Percent	Item	Percent
Type of structure:		Sewage disposal:	
1 unit	61.4	Public sewer or septic	83.5
2 units	9.0	Privy	16.5
3 or more units	29.6		
Number of rooms:		Water source:	
1 room	51.9	Wells	45.5
2 rooms	21.1	Public water system	50.2
3 or more rooms	27.0	No answer	4.3
Complete plumbing:		Heating equipment:	
Yes	31.8	Stove or fireplace	26.9
No	68.2	Floor or well furnace	21.6
		Other heating equipment	23.5
		No heating equipment	28.0

APPENDIX A: RELIABILITY OF ESTIMATES

There are two types of errors associated with estimates based on data from sample surveys -- sampling errors and nonsampling errors.

A sample selected from a larger universe is only one of many possible samples that could be selected using the same sampling method. And the estimates of population values derived from each of several samples would likely differ from each other even if the same instructions, schedules and enumerators were used. This variation or deviation of the sample estimate from the average of all possible samples is defined as the sampling error and is measured in terms of its standard error.

Standard errors also partially measure the variation in estimates due to non-sampling errors, mainly those resulting from response and enumerator errors but not those resulting from such things as biases in the data. These other sources of non-sampling error cannot be treated accurately with the data used in this study. But it is reasonable to expect that they are small and where they do exist are often offsetting.

With the standard error and the sample estimate one can construct confidence interval estimates within a specific probability of being true. The confidence interval covered by one standard error is one standard error below the sample estimate and one standard error above the estimate and would include the average of all possible estimates (the true mean of the universe from which the sample was selected) 68 percent of the time. This is often referred to as a 68 percent confidence interval. For example, when the sample estimate is 100, with a standard error of 10, 68 percent of the time the true mean would be between 90 (100 minus 10) and 110 (100 plus 10). Put another way, 68 percent of the time the sample estimate will be within one standard error (10 in this example) either above or below the true value.

For the 90 percent confidence interval 90 percent of all sample estimates would fall within an interval which is 1.6 standard errors below and 1.6 standard errors above the true value of the quantity being estimated. And at the 95 percent interval, 95 percent of the sample estimates would fall within 2.0 standard errors.

The reliability of an estimated percentage, as used in this study, depends both on the size of the percentage and the size of the sample on which the percentage was based (and to a much lesser extent on the size of the population from which the sample was drawn). Appendix table 1 lists approximate standard errors of estimated percentages for the hired farmworker survey sample and appendix table 2 lists the approximate standard errors for the rural farm and rural nonfarm survey sample.

To test the significance of a difference between two estimated values in this study, one must combine the standard errors of each of the compared numbers to derive an estimate for the standard error of their difference. The standard error of the difference between two sample estimates is approximately equal to the square root of the sum of the squares of the standard error of each sample estimate considered separately. For example, suppose that an estimated percentage of 5.0 from sample A has a standard error of 1.2 and an estimated percentage of 3.2 from sample B has a standard error of 0.8. Then the standard error of the difference is $\sqrt{1.2^2 + .8^2} = 1.4$. This standard error (1.4) is then used in the same way as is the standard error of an individual sample estimate. The sample difference is 5.0 minus 3.2, or 1.8. Since 1.8 is greater than one standard error (1.4) the two compared percentages are significantly different at the 68 percent confidence level. However, the difference is not significant at the 90 percent level since 1.6 standard errors is 2.2, which is larger than the actual difference in the estimates of 1.8.

Appendix A table 1--Standard errors of percentage distribution for hired farmworker households (68 chances out of 100)

Base of percentage	Estimated percentages					
	2 or 98	5 or 95	10 or 90	15 or 85	25 or 75	50
(000)						
25	4.4	6.8	9.4	11.2	13.7	15.8
50	3.2	4.9	6.7	8.0	9.6	11.2
100	2.2	3.4	4.8	5.7	6.8	7.9
250	1.4	2.3	3.0	3.6	4.3	5.0
500	0.9	1.5	2.2	2.5	3.1	3.5
1,000	0.7	1.1	1.5	1.8	2.2	2.5
2,500	0.4	0.7	1.0	1.2	1.4	1.6
3,000	0.4	0.6	0.9	1.0	1.3	1.4

Appendix A table 2--Standard errors of estimated percentages farm and nonfarm households (68 chances out of 100)

Base of percentage	Estimated percentage					
	2 or 98	5 or 95	10 or 90	15 or 85	25 or 75	50
(000)						
5	7.5	11.7	16.1	19.2	23.3	26.9
10	5.3	8.3	11.4	13.6	16.5	19.0
25	3.4	5.2	7.2	8.6	10.4	12.0
50	2.4	3.7	5.1	6.1	7.4	8.5
100	1.7	2.6	3.6	4.3	5.2	6.0
250	1.1	1.7	2.3	2.7	3.3	3.8
500	0.8	1.2	1.6	1.9	2.3	2.7
1,000	0.5	0.8	1.1	1.3	1.6	1.9
2,500	0.3	0.5	0.7	0.8	1.0	1.2
5,000	0.2	0.4	0.5	0.6	0.7	0.8
10,000	0.2	0.3	0.4	0.4	0.5	0.6
25,000	0.1	0.2	0.2	0.3	0.3	0.4

APPENDIX B: FULL-TIME AND PART-TIME HIRED FARMWORKERS

Appendix B table 1--Number and proportions of housing occupied by full-time and part-time hired farmworkers, 1975

Position in household and tenure	Full-time		Part-time		Total	
	<u>1,000 units</u>	<u>Percent</u>	<u>1,000 units</u>	<u>Percent</u>	<u>1,000 units</u>	<u>Percent</u>
Head of household:						
Owner occupied	125	31.7	294	48.3	419	41.8
Renter occupied--						
Cash	95	24.1	238	39.1	333	33.2
No cash	174	44.2	77	12.6	251	25.0
Total	394	100.0	609	100.0	1,003	100.0
Not head of household						
Owner occupied	91	75.8	664	74.7	755	74.9
Renter occupied--						
Cash	21	17.5	171	19.3	192	19.0
No cash	8	6.7	53	6.0	61	6.1
Total	120	100.0	888	100.0	1,008	100.0
Total household						
Owner occupied	216	42.0	958	64.0	1,174	58.4
Renter occupied--						
Cash	116	22.6	409	27.3	525	26.1
No cash	182	35.4	130	8.7	312	15.5
Total	514	100.0	1,497	100.0	2,011	100.0

Appendix B table 2--Types of housing structures occupied by hired farmworkers, 1975

Item	Full-time	Part-time	Total
	<u>Percent</u>		
Head of household:			
Owner occupied--			
One-family (site-built)	81.6	78.9	79.7
One-family (mobile home)	18.4	20.1	19.6
Multiple-unit	--	1.0	.7
Total	100.0	100.0	100.0
Renter occupied--			
One-family (site-built)	80.2	61.6	70.2
One-family (mobile home)	11.2	9.2	10.1
Multiple-unit	8.6	29.2	19.7
Total	100.0	100.0	100.0
Not head of household:			
Owner occupied--			
One-family (site-built)	97.8	92.2	92.8
One-family (mobile home)	2.2	7.1	6.5
Multiple-unit	--	0.7	.7
Total	100.0	100.0	100.0
Renter occupied--			
One-family (site-built)	89.7	80.8	81.8
One-family (mobile home)	--	4.4	4.0
Multiple-unit	10.3	14.8	14.2
Total	100.0	100.0	100.0
Total household:			
Owner occupied--			
One-family (site built)	88.4	88.1	88.1
One-family (mobile home)	11.6	11.1	11.2
Multiple-unit	--	.8	.7
Total	100.0	100.0	100.0
Renter occupied--			
One-family (site-built)	81.2	69.6	73.8
One-family (mobile home)	10.1	7.2	8.2
Multiple-unit	8.7	23.2	18.0
Total	100.0	100.0	100.0

Appendix B table 3--Hired farmworker housing with five more rooms, 1975

Type of household and tenure	Full-time	Part-time	Total
	<u>Percent</u>		
Head of household:			
Owner occupied	68.8	64.6	65.9
Renter occupied	49.8	32.4	40.4
Not head of household:			
Owner occupied	96.7	92.2	92.7
Renter occupied	69.0	69.6	69.6
Total households:			
Owner occupied	80.6	83.7	83.1
Renter occupied	51.7	47.9	49.2

Appendix B table 4--Hired farmworker housing with incomplete plumbing, 1975

Plumbing condition	Full-time	Part-time	Total
	<u>Percent</u>		
Head of household:			
Owner occupied	96.0	95.6	95.7
Renter occupied	89.2	78.1	83.2
Not head of household:			
Owner occupied	98.9	97.4	97.6
Renter occupied	86.2	83.5	83.8
Total households:			
Owner occupied	97.2	96.9	96.9
Renter occupied	88.9	80.3	83.4

Appendix B table 5--Value and gross rent distribution of hired farmworker housing, 1975 ^{1/}

Value and rent	Full-time	Part-time
	<u>Percent</u>	
Value:		
Under \$5,000	9.7	5.7
\$5,000-\$9,999	14.4	10.7
\$10,000-\$19,999	20.4	28.2
\$20,000-\$29,999	15.7	16.6
\$30,000 or more	39.8	38.8
Total	100.0	100.0
Median	\$23,700	\$23,200
Rent:		
Under \$100	23.2	43.4
\$100-\$199	13.8	27.5
\$200-\$299	1.3	3.5
\$300 or more	.7	1.5
No cash rent	61.0	24.1
Total	100.0	100.0
Median	<\$100	<\$100

^{1/} Value is the respondent's estimate of how much an owned house and lot would sell for if it were for sale. Values are shown only one one-family homes on less than ten acres without a commercial establishment on the property. Cooperatives, condominium, mobile homes and trailers are excluded. Gross rent is the agreed upon rent plus an estimate for utilities (electricity, gas, water) and fuel if included in the agreed upon rent. Rent statistics exclude one family houses, mobile homes and trailers on ten acres or more. No cash rent is tabulated separately.

Appendix B table 6--Proportion of hired farmworker housing with complete plumbing by household income, 1975

Income and tenure	Full-time	Part-time	Total
	<u>Percent</u>		
Income less than \$5,000			
Owner occupied	89.6	85.7	86.7
Renter occupied	72.3	66.7	68.2
Income \$5,000-\$9,999			
Owner occupied	98.5	97.5	97.7
Renter occupied	95.4	90.2	92.7
Incomes \$10,000 and over:			
Owner occupied	100.0	99.5	99.6
Renter occupied	100.0	95.9	97.1

APPENDIX C: DEFINITIONS

Hired farmworker: Any civilian, noninstitutionalized person who did farmwork for cash wages even if only for 1 day.

Farmwork for cash wages: Any farmwork done on or off the farm that is connected with the production, harvesting, and marketing of farm products in which a cash salary or wage is paid. Not included are work performed by the farm operator or his family if no wages were received, contract work done by independent contractors, or exchange work between farmers.

Rural farm households: Households living in housing units located on farms are classified as rural farm households. Farms include places with 10 or more acres from which at least \$50 was received from the sale of farm produce during the past year or places of less than 10 acres from which \$250 or more was received from the sale of farm produce.

Rural nonfarm households: Occupants of rural housing not classified as rural farm housing.

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