

Beet Workers on Relief
in
Weld County, Colorado

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SUMMARY

1. A survey was made of 25 per cent of the rural-residing "Spanish-speaking" cases which received emergency relief in Weld County, Colorado at any time during the period February - October, 1935, inclusive and which had a head whose usual occupation was beet laborer or who took employment at beet labor upon leaving the relief rolls. This sample was composed of 231 cases of which 192 were located as still resident within the county at the time of the survey in the spring of 1936.
2. The average size of case was 5.6 persons.
3. About half the population was in the "dependent" age groups of 15 or less or 65 or over.
4. An average of two workers per case was reported as working or looking for work; over one-third of the entire population were reported as working or seeking work.
5. Average income per case from all sources (excluding the value of certain items furnished) was \$436 for the year March, 1935 - February, 1936; half of this income came from beet labor, 40 per cent was supplied by a public agency.
6. Each case received public assistance during 1935-36 almost six months out of the twelve; the average amount received was \$172.
7. During the period March, 1936 - February, 1937, 70 percent of the cases were again given public assistance in Weld county; assistance was given an average of over three months out of the twelve and amounted to an average of \$67.
8. Most of the children reported as working in beets during the 1935 season were 14 and 15 years of age; three out of every four persons aged 14 and 15 worked in beets.
9. Beet laborer has been the usual occupation for most of the heads of these cases a relatively long time; six out of every 10 have been so engaged 10 years or more.
10. The employment secured during 1935-36 other than beet labor, and the experience at other occupations during the past five years, was practically all some type of agricultural work.
11. Cost of living for cases having two or more persons and which were operated as a household for the full twelve-months period studied, averaged \$564 per case or \$120 per consumption unit.
12. Food was the most important single item in the cost of living, accounting for one-half of the total costs.
13. Only the group of cases having incomes of \$800 or more managed, on the average, to keep their costs of living for the year less than their income.

14. Dwellings had an average of 2 1/2 persons per room.
15. The English language cannot be used for all three of the practices of reading, writing and speaking by 42 per cent of the males and 55 per cent of the females, aged 16 and over.
16. Practically no school attendance is recorded for persons 16 years of age and over.
17. One person in 10 aged 16 and over has completed eighth grade; one person in 156 aged 16 and over has completed high school.
18. One fourth of the children aged 6-15, inclusive, had no school attendance record during 1935-36.
19. Grade attainment of children of school age shows great retardation.
20. Males missed an average of 35 days of school out of approximately 180 and females an average of 41 school days, during the 1935-36 term.
21. One case in four came to Weld county after 1929: 90 per cent came after 1919.
22. Mexico and New Mexico have been the chief sources of these cases.
23. A high birth rate is indicated by the ratio of 804 children under the age of 5 per 1000 women aged 15-44 and by the fact that the unbroken families reported an average of 5.3 live births.
24. Infant mortality rates have been high.

BEEF WORKERS ON RELIEF IN WELD COUNTY, COLORADO 1/

INTRODUCTION

Introduction during recent years of wide-spread programs of public assistance for those in need has seemed to attract increased public attention to the social and economic problems associated with what is known in Colorado as the "Spanish-American and Mexican" or "Spanish-speaking" population usually employed to do the hand labor in sugar beet fields. The extent of these problems varies somewhat with the demand for the Spanish-speaking labor, because this group has little capacity, by reason of training or experience, and limited opportunity to engage in other types of employment when not needed in the beet fields. Fluctuations in demand for labor are indicated by variation in the beet acreage grown.

The peak in Colorado sugar beet production, and presumably in labor demand, was reached in 1930 when 242,000 acres were harvested.^{2/} Acreage has fluctuated downward since 1930 until in 1935 only 140,000 acres were harvested. This 1935 figure was only 58 per cent of the peak production, and was the smallest acreage reported since 1925. These figures explain the fluctuation and decline of the demand for beet workers and show why a major problem faced by administrators of the various public assistance programs in the beet growing areas has been that of the Spanish-speaking beet laborer group.

Weld County, the location of the survey to be reported here, grew 41 per cent of the state's sugar beet acreage harvested in 1935^{3/} and had 35 per cent of the Colorado farmers reported as beet growers by the 1935 United States Census of Agriculture.^{4/} This county, like the entire state, reached peak acreage in 1930 and has fluctuated downward since. The 1935 acreage of 57,212, smallest since 1928, was 62 per cent of the peak production, 77 per cent of the 1926-35 ten-year average and 83 per cent of the 1931-35 five-year average acreage harvested.^{5/}

1/ All responsibility for statements appearing herein rests with the author and not with the Works Progress Administration.

2/ Colorado Agricultural Statistics, 1935; United States Department of Agriculture and Colorado State Planning Commission, p. 61.

3/ Ibid, p. 20.

4/ Ibid, p. 46.

5/ Data supplied by F. K. Reed, Colorado Agricultural Statistician.

Beet laborers and Spanish-speaking families have made up a large share of Weld County's rural relief load. A total of 3,536 rural cases^{2/} received assistance from the Emergency Relief Administration at some time during the period from February through November, 1935.^{3/} Of these 3,536 cases, 32 per cent were "Spanish-American or Mexican"^{4/} in 29 per cent of all cases the head reported beet labor as the usual occupation.^{5/} The Spanish-speaking cases made up 84 per cent of all beet laborers on relief; of all Spanish-speaking cases on relief, 77 per cent reported the usual occupation of the head as beet laborer but only 7 per cent of the non-Spanish-speaking cases reported beet laborer as the usual occupation. The connection between beet labor and the Spanish-speaking in Weld county is clear.

When Federal emergency relief ended, little information was available concerning the status of the beet laborers who had been on relief. A follow-up survey of these cases was therefore planned.

Purpose of Survey - The major purpose of the survey was to obtain more complete and timely information about the economic and social status and characteristics of the Spanish-speaking people than was available as the basis for any action program.

Scope and Method - The survey included a 25 per cent sample of all "Spanish-American and Mexican" rural cases who received emergency relief at any time from February through October, 1935, and whose heads reported beet laborer as the usual occupation or which were closed from relief rolls because of having secured a job in the beet fields. The survey was made in March and April, 1936, by experienced case workers. Data was gathered covering the period, March 1, 1935-February 29, 1936. Statistics of public assistance extended through February, 1937.

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- 1/ "Rural" as used in this report includes all persons living on farms and in places of less than 2,500 inhabitants.
 - 2/ A "Case" was considered as one or more related or unrelated persons who lived together and who received relief assistance as one unit.
 - 3/ The Emergency Relief Administration ended assistance in Colorado November 30, 1935. Data based on "Survey of Current Changes in the Rural Relief Population" conducted in Weld County, February through November, 1935 by the Division of Research, Statistics and Finance of the Federal Emergency Relief Administration in Cooperation with the Colorado Agricultural Experiment Station.
 - 4/ All persons born in Mexico, who were not definitely white, Negro, American Indian, Chinese or Japanese were reported as Mexicans. Persons not meeting the definition of Mexican but locally classed as Spanish-American or Mexican were reported as Spanish-American. These persons constitute what are referred to as "Spanish-speaking" people in this report.
 - 5/ "Usual Occupation" was defined as the job (other than work relief) lasting for as long as four consecutive weeks, at which the person had worked longest during the last ten years.

The 25 per cent sample included 231 cases of whom 192 were located as still resident in the county; 39 could not be located within the county for personal interview. It is chiefly data about the 192 cases which are reported here.

GENERAL CHARACTERISTICS OF CASES

Residence - At the time the cases left emergency relief, 106 resided in the open country and 86 in villages.^{1/} When these cases were contacted for this survey, 97 were resident in the open country, 83 in villages, and 12 in a city.^{2/}

Case Size - The average size of case is 5.6 persons. The distribution by number of persons per case is as follows:

<u>Number of Persons in Case</u>	<u>Number of Cases</u>
1	12
2	13
3	28
4	36
5	17
6	18
7	13
8	12
9	22
10	11
11	7
12	2
13	1
Total Cases	192

Age and Sex Distribution - There are 120 males per 100 females, reflecting the demand for male labor.

The age distribution (Table I) shows half the population to be in the "dependent" years of 15 or less and 65 or over. This dependency burden consists mostly of young persons; the proportion of aged dependents is less than one-fourth that for the total population of Colorado.^{3/}

^{1/} A village was defined as a place of 50 to 2,500 population.

^{2/} A city was defined as a place of more than 5,000 population; Greeley the county seat, is the only city in Weld county.

^{3/} See Olaf F. Larson and John E. Wilson "Social Security and Rural Relief in Colorado", Cooperative Plan of Rural Research, Research Bulletin No. 2, June, 1936.

Table I. Age Distribution of Persons in 192 Sample Cases

Age	Per Cent		
	Male	Female	Total
Total	54.7	45.3	100.0
15 or less	25.7	23.2	48.9
16 - 24	9.6	8.8	18.4
25 - 64	18.7	12.6	31.3
65 or over	0.7	0.7	1.4

Type of Family - Needs of a family are influenced by the age of its members; the kind and amount of work which can be secured is partly dependent upon the composition of the individual family. The cases surveyed are classified as follows, disregarding unrelated persons living with some of the cases:

Husband and wife	8 per cent.
Husband and wife and children under 16 only	44 per cent
Husband and wife and children over 16 only	7 per cent
Husband and wife and children both under and over 16	28 per cent
Broken families (lacking husband or wife) and single persons	13 per cent

Number and Proportion of Workers - An average of two persons per household was reported as working or seeking work. Over one-third, 36 per cent, of the entire sample population was reported as working or seeking work; this was the report for 35 per cent of the males aged 16-64 inclusive, and 28 per cent of the females of the same age group. Analysis of the age of the workers (Table II) shows the majority are in the younger age groups; female workers are younger than male workers.

Table II. Age Distribution of Persons Reported as Working or Seeking Work

Age	Males		Females	
	Number	Per Cent	Number	Per Cent
Total	306	100.0	74	100.0
15 or less	16	5.3	9	12.2
16 - 24	96	32.0	36	48.7
25 - 44	122	40.7	25	33.8
45 - 64	61	20.3	4	5.4
60 or over	5	1.7	0	0.0

INCOME

An average of \$436 income per case was received for the year March, 1935 through February, 1936.^{1/} Over half of this income came from earnings in the beet fields, 9 per cent came from other non-relief work, and 39 per cent was derived from some form of public assistance such as ERA and WPA (Table III).

Table III. Average Income per Case, March, 1935 through February, 1936, and Source of Income

Source of Income	Amount of Income	Per Cent
Total	\$436	100.0
Public Assistance	172	39.4
Beet Labor	222	50.9
Other Non-relief Work	41	9.4
Other Sources	1	0.3

Public assistance includes aid in cash or the value of products received from the Emergency Relief Administration, Works Progress Administration, Civilian Conservation Corps, Federal Surplus Commodities Corporation, The County Board of Commissioners and Categorical Aid, i.e. aid to the aged, blind, and dependent children;

^{1/} This does not include the value of furnished rent, farm produce either grown or received in exchange for work, or gifts in kind.

the amount of income for beet labor is not gross earnings but gross earnings minus the amount paid out for hired labor outside the household; "other sources" include gifts and sale of produce.

The arithmetic average is greatly changed by a few very large or small incomes so a better picture of the incomes received is given by a frequency distribution (Table IV). This analysis shows that more than half of all the cases had a yearly income from all sources of less than \$400. More cases received from \$300 to \$400 than received any other amount.

Table IV. Yearly Incomes Grouped by Size

Size of Income	Cases receiving income	
	Number	Per Cent
Total	192	100.0
\$199 or less	16	8.3
200 - 299	38	19.8
300 - 399	51	26.6
400 - 499	32	16.7
500 - 599	17	8.9
600 - 699	14	7.3
700 - 799	11	5.7
800 or more	13	6.7

The average income received per case from beet labor and other non-relief work requires further explanation. Eight of the 192 cases had no beet work during the 1935 season and only two-thirds of the cases had some work in all operations of thinning, hoeing, and topping. The 129 cases having some work in all beet field operations received an average of \$288.70 for such work, after deducting the amount paid out in cash for hired labor; 46 cases hired some help, each paying out an average of \$189 for extra labor. An average of \$231.72 was received by all cases having beet work at any time during the year.

About 72 per cent of the cases had non-relief employment, other than beet labor, at some time during the year; the 138 cases having such non-relief work averaged earnings of \$57.10.

RELIEF

Public assistance of some form and averaging \$172 was granted each case an average period of five months and three weeks during the year of study (Table V). Three months was most frequently the length of time aid was received. About half the cases received

public aid less than six of the twelve months.

A follow-up study of the relief records of these cases was made early in 1937, covering the period March, 1936 through February, 1937. A record of public assistance was found for 135 or 70 per cent of the 192 cases. It is not known whether the other 30 per cent had no need of relief, were not accepted by public agencies, or had moved out of the county during the second year. These 135 cases received an average of \$67 in public aid, excluding surplus commodities, for an average period of slightly over three months. About half the cases received aid two months or less. (Table V)

Table V. Number of Months Public Aid Received

Number of Months	March 1935-February 1936		March 1936-February 1937	
	Number Cases	Per Cent Cases	Number Cases	Per Cent Cases
Total	192	100	135	100
1	3	2	29	21
2	9	5	36	27
3	41	22	17	13
4	18	9	25	18
5	37	19	18	13
6	18	9	3	2
7	10	5	2	2
8	9	5	1	1
9	9	5	1	1
10	8	4	1	1
11	12	6	1	1
12	18	9	1	1
Average Number Months	5.7		3.1	

Seasonality of Relief - The seasonal nature of beet labor is reflected in the relief load. The proportion of cases receiving public assistance reached a low point during the summer of 1935, started to rise in the early fall, increased greatly in December and reached a peak in the late winter of 1935-36. (Table VI).

The follow-up survey of relief records during 1936-37 revealed the same general seasonal trend but in all months a smaller proportion of the cases received public assistance than in the previous year. This decreased public assistance may reflect decreased

need because of more work and consequently larger incomes and more savings during the 1936 beet season or it may reflect changed administrative policy on the part of public agencies; probably both factors worked to reduce the volume of public aid given.

Table VI. Public Assistance by Months

Month	March 1935-February 1936		March 1936-February 1937	
	Number of Cases	Per Cent Cases	Number of Cases	Per Cent Cases
Total	192	100	135	100
March	183	95	103	76
April	182	95	79	59
May	175	91	29	22
June	56	29	6	4
July	32	17	9	7
August	43	22	7	5
September	55	29	7	5
October	52	27	5	4
November	53	28	6	4
December	77	40	22	16
January	114	59	67	50
February	134	70	81	60

Relief Record in Past - The public assistance received by these cases during the period covered by the survey was a continuation of a relief record started previously for the majority. Although it is difficult to obtain a complete record of the aid given each case by the various programs between 1932 and the beginning of ERA, the following data are presented for what they are worth. They probably understate the proportion of cases receiving public aid in the earlier years and overstate the proportion receiving aid only in the most recent years:

Aid given some time all years 1932-33-34-35	11 per cent
Aid given some time all years 1933-34-35	28 per cent
Aid given some time both 1934-35	48 per cent
Aid given first in 1935	13 per cent

NON-RELIEF EMPLOYMENT

Contracts for Beet Labor - Written contracts for beet labor during 1935 were reported by 126 cases, 27 reported an oral contract, 31 worked for day wages and eight had no beet work.

Beet Labor Operations - Work at the following combinations of the thinning, hoeing and topping operations were reported as performed:

Blocking and thinning, hoeing and weeding, and topping	129 cases
Blocking and thinning, and topping	27 cases
Blocking and thinning and hoeing and weeding	5 cases
Blocking and thinning only	10 cases
Topping only	11 cases
Not reported	2 cases

Number of Beet Workers Per Case - Cases having beet work reported the number of persons from each who actually worked at one or more operations during the 1935 season as follows:

One beet worker per case	79 cases
Two beet workers per case	46 cases
Three beet workers per case	24 cases
Four beet workers per case	24 cases
Five beet workers per case	8 cases
Six beet workers per case	2 cases
Eight beet workers per case	1 case

Volume of Beet Work Per Case - There is considerable difficulty in arriving at the number of acres of beets handled per case or per worker and in determining the number of days spent in each operation. The number of acres handled by the cases in this survey may not indicate the actual capacity of the workers. For the 109 cases which had the same number of acres for all operations, an average of 24 acres per case was worked. For 149 cases which worked at blocking and thinning on a contract basis, an average of 21.8 acres per case were handled. The 128 cases reporting hoeing and weeding on a contract basis averaged 23.3 acres. The 141 cases reporting acres contracted for topping averaged 22.3 acres. An average of seven acres was handled per worker by those cases having the same acreage for all operations, when hired workers are counted as full time and all members of the family are calculated on an adult basis. If hired labor is omitted from the calculation (although 46 cases reported hired labor), the acreage per family worker is 10.

Although the beet season runs from late spring until late fall, the laborer is not required for field work full time during that period. The cases in this survey having beet work in one or more operations averaged only 39.4 days actual employment per case. This basis of calculation underestimates the amount of work available, however, so when the estimate is confined to those cases actually engaging in each operation the following average time is found:

Blocking and thinning	17 days
Hoeing and weeding	11 days
Topping	18 days

An average case having employment in all operations would therefore have actually worked in the beet fields 46 days during the 1935 season. This figure, of course, does not give the total number of

days of labor spent by all workers but simply the number of days during which workers were needed in beet labor operations.

Child Labor and Age of All Beet Workers - Three children out of every four aged 14 and 15 were reported as having worked in the beet fields during the 1935 season. The majority of child workers fell in this age group (under the invalidated Agricultural Adjustment Act the Sugar Beet Production Adjustment Contract between growers and the Secretary of Agriculture prohibited labor of children under the age of 14 years and limited the daily work of children aged 14 to 16 inclusive, to eight hours).

The number of persons reported as working in beets during 1935 was somewhat larger than the number working or seeking work at the time of contact in this survey because of changes in household membership and because some members work only at beet labor. However, the age distribution of the persons who did beet work was almost identical with that given for persons working or seeking work in Table II.

Length of Experience in Beet Work - Nearly all the heads of the 192 cases reported beet work as their usual occupation for five years or more; one of every three had been so engaged from 15 to 20 years (Table VII). In fact, for all age groups of heads aged 35 or over the period beet work had been the usual occupation was most frequently 15 to 20 years; the heads under 35 most frequently reported 10 to 14 years of beet labor experience. This is one factor which probably influences employability in other types of work.

Table VII. Length of Time Beet Labor Reported Usual Occupation of Head of Household

Number of Years	Cases	
	Number	Per Cent
Total	192	100.0
4 or less	14	7.2
5 - 9	66	34.4
10 - 14	46	24.0
15 - 20	66	34.4

Employment Other Than Beet Work - Another factor affecting employability at jobs other than beet labor is the experience already had at such other types of work. It was previously mentioned that 72 per cent of all cases had one or more members who had some employment at non-relief work, other than beet labor, during the year of study. The proportion of workers having any experience at other occupations during the preceding five years was reported. It was found that 124 or 65 per cent of the heads of the cases reported such experience, as did 56 or about 30 per cent of the household members, other than heads, who were working or seeking work. Practically all

of this experience was at other agricultural work such as regular farm labor, sheep shearing or herding, picking beans or peas, threshing and haying (Table VIII).

Table VIII. Occupations, Other than Beet Work, Engaged in During Preceding Five Years

Occupation	Household Status	
	Head	Other Than Head, Working or Seeking Work
Total	192	244
None	68	132
Farm Operators	4	0
Agricultural Work Other Than Beet Labor	107	55
Trucker	1	0
Work on Railroad	3	0
Iron Cutter	1	0
Miner	4	0
Ditch Digger	1	0
Dish Washer	1	0
Carpenter	0	1
Pool Hall Operator	1	0
Minister	1	0

STANDARDS OF LIVING

Cost of Family Living - The average cost of the living for the 176 cases which contained two or more persons and were operated as a household for the full twelve months period of study was \$564 although the income was only \$456 for these cases. The cost of living amounted to \$120 per consumption unit, which is a unit of measurement equal to the consuming power of an adult male 18-59 years of age. Of this amount 78 per cent was purchased by the household individuals and 22 per cent was furnished by some public or private agency in the form of goods or services, but mostly for food. No attempt was made to give a rental value to houses owned or supplied rent-free, nor was any value placed on fuel or food secured in exchange for work, or by gift, or by home production, as reliable estimates were difficult and the values so obtained would have been only a small proportion of the total cost of living.

Food was the most important item on the budget, amounting to \$291 or 50 per cent of total living costs (Table IX).^{1/} Clothing was ^{2/} For an indication of the possible adequacy of the food, see Appendix C.

the second most important item, averaging \$80 per case or 14 per cent of all expenditures. Automobile costs, while not entirely attributable to family living costs because of business purposes and because part of the capital outlay is recoverable, ranked third in importance. House operations and furnishings, including fuel, light, water, laundry supplies, and such items as curtains, bedding, dishes, and furniture, came fourth with an average cost of \$63 or 11 per cent of the total. Health expenditures were fifth and housing sixth. The miscellaneous items grouped under "all other" chiefly include what are usually classified under "personal" and "advancement" items in standard of living studies; it includes the following expenditures and average amounts; formal and informal education, \$3.75; haircuts, \$2.91; movies, \$2.88; trips, \$2.09; church, \$1.62; pool, 99 cents; beauty shop, cosmetics and jewelry, 63 cents; dances, 46 cents; and lodge, 34 cents.

Table IX. Average Cost of Living for 176 Cases
During March 1935 - February 1936

Items	Amount	Per Cent of Total
Total Cost	\$564	100.0
Furnished	121	21.5
Purchased	443	78.5
Food, Total	281	49.8
Furnished	92	16.3
Purchased	189	33.5
Clothing, Total	80	14.2
Furnished	8	1.4
Purchased	72	12.8
Housing, Rent and Upkeep, Total	21	3.7
Furnished	4	0.7
Purchased	17	3.0
Home Operations and Furnishings, Total	63	11.2
Furnished	16	2.8
Purchased	47	8.4
Health, Total	30	5.3
Furnished	2	0.3
Purchased	28	5.0
Auto, Total	73	13.0
Capital Outlay	34	6.1
Operation	39	6.9
All Other	16	2.8

About half of the cases had a cost of living under \$500 a year. More cases had expenditures between \$500 and \$600 than had any other amount (Table X).

Table X. Yearly Cost of Living Grouped by Amount

Costs	Number of Cases	Per Cent
Total	176	100.0
\$199 or less	3	1.7
200 - 299	13	7.4
300 - 399	29	16.5
400 - 499	30	17.0
500 - 599	35	19.9
600 - 699	23	13.1
700 - 799	24	13.6
800 or more	19	10.8

The average living costs incurred during the year exceeded the income during the same period by \$108.1/ Only the small group of cases having incomes during the year of \$800 or more managed, on the average, to keep their living costs within their incomes (Table XI). In other words, as some other standard of living studies have also shown, cost of living and income may not be strikingly related during a given year.^{2/} The difference is accounted for by securing loans, using savings, and mostly by obtaining credit for goods and services.

Table XI. Cost of Living in Relation to Income.

Income Groups	Cases in Group	Average Income	Average Cost of Living	Average Number of Consumption Units
All Groups	176	\$456	\$564	4.7
\$199 or less	9	179	373	2.4
200 - 299	32	260	385	3.0
300 - 399	49	342	512	4.0
400 - 499	31	438	545	5.0
500 - 599	17	547	728	6.0
600 - 699	14	653	739	7.0
700 - 799	11	737	828	6.4
800 or more	13	936	763	7.6

The living costs do not include payments on old debts which were outstanding at the beginning of the year, cost of feed or live-stock, cost of seed or gardens, or savings.

See for example, E. L. Kirkpatrick, P. E. McNall and May L. Cowles "Farm Family Living in Wisconsin", Research Bulletin 114. Wisconsin Agricultural Experiment Station.

There is an indication in Table XI that the cost of living is related to the number of consumption units in the household. Further analysis reveals that, in general, while cost of living increases with the size of household, it is also true that as the household size increases the cost per consumption unit decreases. That is, the cost of living for a household of 10 units is less than 5 times the cost for a household of 2 units.1/

There was apparently some improvement in financial status during the year because of an increase in the proportion having savings and a decrease in the proportion having debts, as indicated by the following.

Cases reporting savings at beginning of year	7 per cent
Cases reporting savings at end of year	15 per cent
Cases reporting debts at beginning of year	65 per cent
Cases reporting debts at end of year	61 per cent

Facilities for Home-Furnished Living - The quantity and variety of food items available to families is greatly influenced by use of supplies which can be furnished by a garden, cows or goats, and poultry. The presence of these facilities but not their use, is indicated by the following:

Cases having garden during 1935	56 per cent
Cases having one or more cows	6 per cent
Cases having one or more goats	9 per cent
Cases having poultry	47 per cent

Housing - Type and source of housing and amount of room varied during the year. A record was obtained of housing both at the time of the survey and during the 1935 season's beet work, but the data presented here is that for the residence at the time of interview for the survey because there was little contrast in the total picture for the two periods.

Housing was secured as follows:

Cases owning houses in which they resided	15 per cent
Cases renting houses in which they resided	31 per cent
Cases obtaining houses free	54 per cent

The type of house was as follows:

Frame, single wall	16 per cent
Frame, boxed or boxed and plastered	70 per cent
Adobe	11 per cent
Other	3 per cent

Size of the house was most frequently two rooms (Table XII). Over-crowding was marked. The number of rooms according to the size of family comes less than one-third of the way towards meeting the standard set up as an index of housing adequacy; there was an average

1/ See Appendix C.

of slightly more than four-tenths of a room per person compared to the one and one-half rooms per person set up by housing experts as a standard of minimum comfort.^{1/} This means, for example, that the average family of five persons had two rooms.

Table XII. Number of Rooms in House Compared With Number of Persons Housed

Number of persons housed	Number of Rooms Per House						
	1	2	3	4	5	6	Not Known
Total, All Sizes of Cases	36	85	43	19	5	2	2
1	3	6	3	1	0	0	0
2	2	8	2	0	0	0	0
3	6	14	4	3	0	0	1
4	10	16	6	1	1	1	0
5	5	8	3	2	1	0	0
6	3	7	4	4	0	0	1
7	1	6	3	2	1	0	0
8	1	5	4	2	1	0	0
9	3	8	6	3	1	0	0
10	2	3	4	1	0	1	0
11	2	1	4	0	0	0	0
12	0	2	0	0	0	0	0
13	0	1	0	0	0	0	0

Home Conveniences - Only one case had a telephone and one had an ice-box for refrigeration. One case in ten had some kind of a radio, including crystal sets. Nearly all houses were lighted by kerosene or gas lamps as only 6 per cent used electricity; however, a few more houses were wired. Almost half, 46 per cent, of the cases had a sewing machine.

Reading Material - Newspapers and magazines are not only an agency of communication but an informal means of education and a media to influence attitudes, behavior and opinion. Only 5 per cent of the cases subscribed to or purchased daily newspapers; half of these were Spanish language newspapers. Thirty-six per cent of the cases subscribed to or purchased weekly newspapers, including Sunday editions of dailies; one in four of these weeklies were Spanish language periodicals. About 22 per cent reported subscribing to or purchasing magazines; the type of reading provided by these magazines is indicated by the following list in order of the most popular; True Story, detective story magazines, agricultural magazines, movie magazines, and women's magazines.

Social Participation - Standards of living are not alone a matter of material things such as food, clothing and shelter, but involve recreation, education, social contacts, participation in

^{1/}N. L. Sims, "Elements of Rural Sociology", New York, Crowell, 1934, p. 442

formal and informal social activities.

The church provides the most important single institutionalized contact for these people. The majority of cases reported persons in the household as church members and contributors; 178 or 93 per cent of all cases were reported as having church members; 123 or 64 per cent gave contributions to the church during the year; and 76 or 40 per cent reported regular church attendance during the year.

Only 12 cases or 6 per cent had household members who were lodge members.

Movie attendance was the most important commercial form of recreation patronized as 137 or 71 per cent of all the cases reported attendance at movies during the year. These 137 cases averaged a total of 30 attendances during the year for all household members.^{1/}

Automobiles - It was shown by Table IX that automobiles cost an average of \$73 per case during the year and that this sum was 13 per cent of the total family living expenditures. However, only 70 per cent of all cases actually possessed automobiles. For these cases the average amount paid out for operating expenses during the year (gas, oil, tires, license, repairs, etc.) was \$53 and the average amount paid towards the purchase price was \$44.

The average purchase price to the present owners of these automobiles was \$146. With the exception of five cases, the autos were second-hand when purchased. The year of purchase, (not the model) of these cars was as follows:

1930 or before	15
1931	10
1932	11
1933	5
1934	19
1935	69
1936	7

Use of Banks - Habits of handling finances are partly indicated by the use of banks; one case in 10 reported they banked their money, another 10 per cent said they had formerly banked money when they had it, and 80 per cent reported they did not keep their money in the bank.

EDUCATION

Use of English Language - Fundamental to the assimilation and adjustment process of different cultural groups is the factor of

^{1/} Total movie attendance was computed as the sum of all attendances during the year by all household members who attended. This total, divided by the number of cases reporting any attendance by any member of the household, gives the average yearly attendance per case.

common language. A major obstacle to facilitating adjustment of the Spanish-speaking sugar beet laborer population is the lack of command of the English language shown by the fact that 15 per cent of the males and 38 per cent of the females 16 years of age and over can not read, write, or speak English and a total of 42 per cent of the males and 55 per cent of the females have the major language handicap of not being able to use English completely for all three practices - reading, writing and speaking (Table XIII). The older persons are more handicapped than the younger ones and the females, in general at all ages, more than the males. Practically all of the children under 16, of school age, can use English.

Table XIII. Use of English Language by Persons Aged 16 and Over

Age	Unable to read Write or Speak English				Able to speak English but unable to read and write it				Percentage of total Each Age group with Incomplete Use of English Language	
	Males		Females		Males		Females		Males	Females
	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent		
Total All Ages	45	15	90	38	83	27	41	17	42	55
16 - 24	1	1	6	6	7	7	14	15	8	21
25 - 64	38	19	79	59	75	33	26	19	57	78
65 or over	6	86	5	63	1	14	1	12	100	75

Education Completed by Persons 16 and Over - There is practically no present school attendance recorded for persons 16 years of age and over. The most frequent number of grades completed is between 4 and 6, and almost as frequent has been the completion of only 1 to 3 grades, inclusive (Table XIV). However, the younger persons have considerably more education than the older ones, with the improvement beginning from the group of persons under 35 years of age. There is much dropping out of school after sixth grade. Females have not gone as far in school as males.

Table XIV. Education of Persons Aged 16 and Over, by Age and Sex

Age	Percentage Distribution of Education					
	Total Per Cent	Highest Grade Completed				
		0	1-3	4-6	7-8	High School Attended
Total, Males and Females	100.0	21.7	29.5	30.5	13.2	5.1
Total, All Males	100.0	22.4	28.0	28.9	14.3	5.9
16 - 24	100.0	2.6	14.5	38.5	30.8	13.7
25 - 34	100.0	19.8	33.7	31.4	10.5	4.7
35 - 64	100.0	41.4	34.4	20.3	3.9	0.0
65 or over	100.0	38.0	62.0	0.0	0.0	0.0
Total, All Females	100.0	20.8	31.3	32.4	11.3	4.2
16 - 24	100.0	5.1	24.6	41.5	21.2	7.6
25 - 34	100.0	22.4	32.8	35.8	7.5	1.5
35 - 64	100.0	35.2	40.7	20.9	2.2	1.1
65 or over	100.0	75.0	12.5	0.0	0.0	12.5*

*Number of cases too small to be reliable

When the educational training is calculated in terms of completion of the elementary and secondary grades, it is discovered that only 10 per cent of the persons aged 16 and over had completed eighth grade and only one in 156 had completed high school. Completion of even eighth grade was almost entirely confined to persons under 35 years of age. By sex, 12 per cent of the males and 8 per cent of the females had completed eighth grade.

School Enrollment of Persons Under 16 - About three of every four persons in the school age, 6 through 15 inclusive, had been enrolled in school during the schedule year. For 25 per cent of the persons of school age there was no record of school attendance during 1935-36. The proportion of children of each age who had attended school varied somewhat but there was a decided drop after the age of 13, particularly for females (Table XV).

Table XV. Proportion of Children Aged 6-15, Inclusive, Enrolled in School 1935-36

Age	Percent Attending School		
	Total	Male	Female
All Ages	74	76	73
6	70	67	72
7	75	67	81
8	83	82	86
9	91	95	83
10	83	81	86
11	79	75	85
12	67	67	67
13	77	77	77
14	62	71	44
15	52	64	42

Grade Attainment of Persons Under 16 - Not only is the education of adult persons of the most elementary nature, and the enrollment of persons of legal school age far from complete, but the grade attainment of persons under 16 indicates considerable retardation. A child of seven should have completed one grade, a child of eight two grades, and a child of ten should normally have finished four grades. The average child of 14 has completed less than five grades of schooling and the child of 15 has completed less than six grades (Table XVI). There is little attendance past the age of 15.

Table XVI. Grade Attainment of Persons Under 16, by Age

Age	Per Cent Completing Grade										Average Grade Completed
	0	1	2	3	4	5	6	7	8	9	
6	74	26									.3
7	84	28	24								.8
8	20	40	40								1.2
9	9	15	40	24	12						2.2
10	12	21	45	9	9	3					1.9
11	7	7	24	24	28	7	3				2.9
12	0	15	15	29	11	26	4				3.3
13	4	4	4	18	26	11	18	15			4.4
14	4	0	8	15	19	15	24	15			4.6
15	4	0	0	8	8	20	36	12	8	4	5.6

Regularity of School Attendance - The retardation is partly explained by the lack of regular attendance at school. Males between the ages of 6 and 15, inclusive, missed an average of 35 school days during the average nine month term or almost 20 per cent of the entire term. Females missed more than the males, having lost an average of 41 days each or the equivalent of two months of the school term.

More school was missed during the beet harvesting season than at any other period, with the greatest amount of absence during October (Table XVII). Except during the beet harvesting months the females consistently missed more school than the males.

Table XVII. Average Number of Days of School Missed Each Month by Persons Aged 6-15 Inclusive, by Sex.

Month		Males	Females
Total		35.2	40.9
March,	1935	3.4	4.4
April,	1935	2.5	4.0
May,	1935	3.2	4.2
September,	1935	5.3	4.5
October,	1935	6.0	5.7
November,	1935	4.8	4.7
December,	1935	3.6	4.6
January,	1936	3.5	4.6
February,	1936	2.9	4.2

Analysis of the proportion of children missing a specified number of days each month during the school term also serves to show there is more absence from school during the fall months than at any other time, and that in most months the males have a better attendance record than the females. In October 18 per cent of the males and 16 per cent of the females lost 16 or more days of school (Table XVIII).

Table XVIII. Proportion Missing Specified Number of Days of School Each Month, by Sex

Month	Sex	Percentage Missing Specified Number Days				
		Total	0 -	1 - 5	5 - 15	16 or more
March,	1935 Male	100	37	45	16	2
	Female	100	24	56	12	8
April,	1935 Male	100	40	46	12	2
	Female	100	25	53	14	8
May,	1935 Male	100	34	44	19	3
	Female	100	20	55	18	7
September,	1935 Male	100	37	35	12	16
	Female	100	51	26	19	14
October,	1935 Male	100	24	43	15	18
	Female	100	33	33	18	16
November,	1935 Male	100	31	37	24	8
	Female	100	31	41	17	11
December,	1935 Male	100	35	47	14	4
	Female	100	24	46	21	9
January,	1936 Male	100	29	52	16	3
	Female	100	23	46	24	7
February,	1936 Male	100	46	40	10	4
	Female	100	33	44	17	6

Some variation in regularity of school attendance is expected according to age of the children. The results were not entirely consistent but, in general, older children lost more school than younger children. For the males, those aged 12 and over lost more than those younger but for the females the greater absence begins at 10 or 11. The major part of the poorer attendance for older children occurred in the fall months, especially for the males.

POPULATION ASPECTS

Length of Residence in County - The heads of nine of every 10 cases came into Weld County after 1919. Greatest influx by five year periods was 1925-29 when 44 per cent last moved into the county. Almost one-fourth last came into the county after 1929 (Table XIX).

Table XIX. Year Head of Case Last Moved into Weld County

Year	Number Heads of Cases	
Total	192	
1934	8	}
1933	11	
1932	4	
1931	11	
1930	11	}
1929	22	
1928	7	
1927	16	
1926	19	}
1925	20	
1920 - 24	30	
1915 - 19	17	
1909 - 14	13	
1909 or before	3	

Place of Birth - The distance of territorial moves and original source of the population is indicated by place of birth. Mexico was the birthplace of almost half the male heads of cases and New Mexico was the birth place for another one-third. The southern part of Colorado ranked third in importance as the source of Weld County's male beet laborers (Table XX). The wives of the heads (and female heads of cases having no male head) came from the same general areas as the males except that Mexico and New Mexico, birth place of three of every four, were of equal importance as a source. Distances and direction of moves are indicated by Figure I.

Figure 1. Place of Birth of Male and Female Heads and Wives of Male Heads

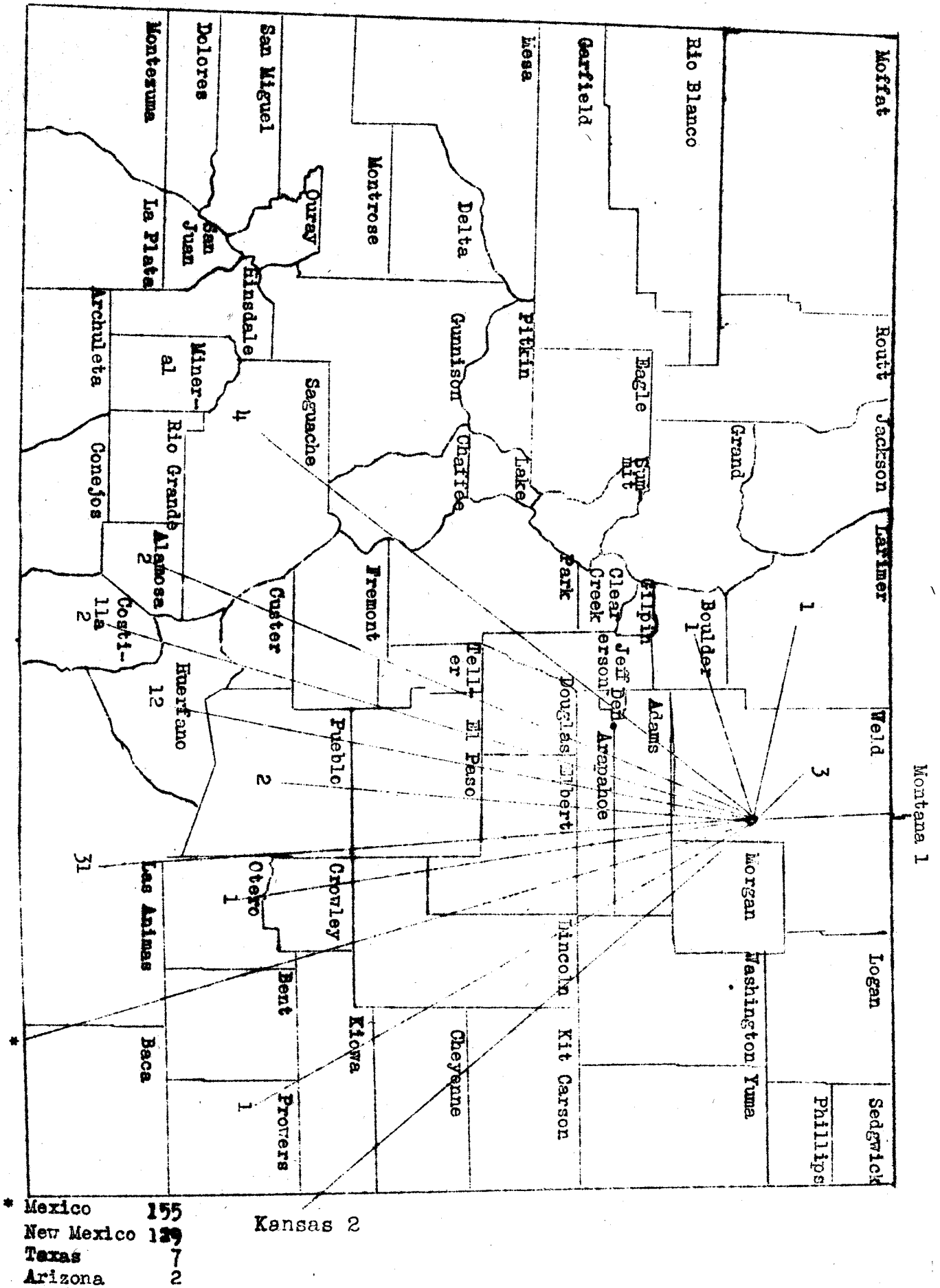


Table XX. Place of Birth of Male and Female Heads of Cases

Location	Male Heads	Female Heads and Wives of Male Heads	Total
Total	187	169	356
Mexico	90	65	155
New Mexico	63	66	129
Texas	5	2	7
Other States	1	4	5
All Colorado Counties	28	32	60

All but six per cent of the children at home in these cases were born in the United States; over half, 52 per cent, were born in Weld County, 20 per cent in other Colorado counties, 18 per cent in New Mexico and 4 per cent in other states.

Place of Residence Preceding Last Move into County - For the 45 cases which last moved into Weld county in 1930 or after, the place of last residence preceding the move is known. Two of every three such cases moved from another Colorado county; one-third came from outside the state (Table XXI). Thus only 8 per cent of all cases moved directly into Weld county from outside the state after 1929.

Table XXI. Place From Which Last Moved Into Weld County for Cases Last Moved in After 1929

Location	Number Cases
Total	45
New Mexico	6
Texas	4
Wyoming	3
Montana	1
South Dakota	1
All Colorado Counties	30
Adams	4
Mesa	4
Pueblo	4
Logan	3
Delta	2
Garfield	2
Huerfano	2
Larimer	2
Las Animas	2
Morgan	2
El Paso	1
Fremont	1
Prowers	1

Destination of Cases Leaving County - It has been previously mentioned that 17 per cent of the sample cases originally selected could not be located because they had moved out of the county. The destination of the majority of these 39 cases was found. The city and county of Denver was the "receiving area" for 14; New Mexico for 5; Mexico, 2; other states, 4; and the remainder went to scattered Colorado counties. At least five of these cases came back into the county again as indicated by the fact that they were given some form of public assistance one or more months during the period March, 1936 - February, 1936.

Births - These cases contained 804 children under 5 years old per 1000 women of child bearing age, 15 to 44, inclusive. This is more than two times the ratio of 370 needed to maintain a stationary population and is to be compared with the ratio of 557 for the entire rural-farm population of the state in 1930 and 488 for the rural non-farm population.

The 165 cases of unbroken families which reported one child or more born alive to the present union had an average of 5.3 live births. The majority of women in these cases are still in the child bearing ages so this average figure does not indicate total number of children born to couples whose families have been completed. The distribution of live births per case is as follows:

1 child	16
2 children	30
3 children	19
4 children	17
5 children	16
6 children	8
7 children	6
8 children	20
9 children	8
10 children	12
11 children	8
12 children	2
13 children	1
14 children	1
15 children	1

Deaths - Associated with the high birth rate has been high death rates, particularly infant mortality. One in five of all children born alive to these couples is now dead. Over half, 90 of the 165 cases, reported the death of one or more children after live birth. Those cases having deaths averaged almost two per case. The distribution of deaths per case is as follows:

0 deaths	75
1 death	48
2 deaths	18
3 deaths	12
4 deaths	8
5 deaths	2
6 deaths	2

The majority of these deaths were of children under one year of age as shown by the following:

Deaths of children under 1 year	64 per cent
Deaths of children 1 - 4	19 per cent
Deaths of children 5 - 9	10 per cent
Deaths of children 10 or over	7 per cent

In addition one case in 8 reported still births or premature births, averaging two for each case so reporting.

CHARACTERISTICS OF SAMPLE CASES WHO MOVED OUT OF THE COUNTY

As previously noted, 39 of the cases which fell in the sample could not be located within the county at the time of the survey. Relief records gave some information about the characteristics of these cases for comparison with the 192 cases found for interview.

These cases differed from the rest of the sample in the following ways:

The average size of household was only 3.8 persons, almost two persons less than the average for the 192 cases.

There were 10 more males per 100 females, or 130 in place of 120.

There was a smaller dependency burden; only 39 per cent of all persons were in the dependent youthful and aged groups as compared with 50 per cent for the cases contacted; most of this difference was accounted for by the smaller proportion of children.

These cases had relatively 3 1/2 times more cases of husband and wife as the only family members and had a smaller proportion with children.

Relief had been received to a more limited extent; 29 per cent first received aid in 1934 or later as compared to 61 per cent of the 192 cases; assistance given within Weld county averaged only half as long as for contacted cases and the amount was only one-third as great.

Mobility was greater as 15 of the 39 cases came into the county after 1929; 10 of these 15 moved into Weld county from states outside of Colorado. At least five of the 39 cases moved back into Weld county for a period during 1936 as indicated by the fact they received public assistance some time during the period March 1936-February, 1937.

To summarize, the cases not contacted had smaller households, a smaller dependency burden, had received less relief and had a higher mobility than cases resident in the county.

BEET WORKERS NOT ON RELIEF

Twelve cases were contacted during the survey who had never received public assistance. These non-relief cases differed from those on relief in having households averaging one person less in size, had slightly less young and aged dependents to support and had more children over the age of 16 at home.

Annual incomes averaged \$516, almost \$100 more than incomes for relief cases. All cases had written contracts for beet work and handled an average of 35 acres per case. All had experience and employment at other occupations during the year, mostly as farm laborer, to supplement the income from beet work. Earnings from beet work averaged \$315 after hired labor had been paid; this is to be compared with the \$232 received by relief cases having beet work.

These cases also had slightly better education and considerably less mobility than beet workers on relief.

Some of the characteristics of both relief and non-relief cases are illustrated by selected case histories.

CASE HISTORIES

The A. Relief Case - The A. Case has 5 members, a male head, aged 57, wife, aged 26, and three children, aged 5, 3, and 1, respectively. Mr. A. was born in New Mexico and Mrs. A. was born in southern Colorado. They moved to Weld county in 1932 and have had their residence in the same village since that time.

Mr. A. completed sixth grade; Mrs. A. completed only second grade and is unable to read or write English.

The A's rent a one-room house for \$2 per month. The home is barely furnished but is kept neat and clean; the floor has no covering over the boards; there are no chairs; there is only one bed so the children sleep on the floor.

Public assistance has been received 39 months out of the 52 from the time aid was first given in November, 1932 until March, 1937. The case was aided by the RFC from November, 1932 until May, 1933, and then was self-supporting until the head went on CWA in February, 1934. A transfer to ERA was made in April, 1934 when the case was given work or direct relief continuously until ERA ended in November, 1935 when a transfer was made to WPA until March, 1936. The case was then unaided for a month, then taken over by the County Department of Public Welfare for two months, then went unaided one month, then went on WPA for three months, was unaided for a month, and then again received aid from the County Department of Public Welfare which was giving assistance at the end of February, 1937. Public assistance received the past two years has amounted to \$425.

Beet work has been the usual occupation of the head only since 1932. No beet work was done during 1935 because Mr. A. was too ill to work in the summer months according to a physician's report. Mr. A. had a few day's private employment shearing sheep in the spring.

Mr. A. is willing to do any kind of work but his health is poor. He tries to keep his bills paid; he has always been cooperative with the representatives of the various relief agencies.

The B. Relief Case - Nine persons comprise the B. case. They are the male head, aged 47; wife, aged 35; son, age 17; and six other children aged 10, 9, 7, 6, 3, and 1, respectively. Both Mr. and Mrs. B. were born in New Mexico; he moved to Weld county in 1910.

Mr. B. has never attended school but he has learned to read and write English; Mrs. B. completed second grade. The grade attainment of the children is below average; the 17 year old son, no longer in school, has completed only fourth grade and was in one grade three years. The 10 year old daughter has completed second grade and the nine year old son, first grade.

The nine persons live in a one-room house which is rented for \$3.50 per month, although during the beet season the family had a three-room house free. There are two beds included in the household furnishings.

Public assistance has been received 32 months out of the 51 in the period from first relief until the end of February, 1937. First aid was received from RFC during the period December, 1932 - May, 1933. The head worked on CWA from December, 1933 until April, 1934, when the case was accepted by ERA until May. In August, 1934 the case came back on ERA and remained there until July, 1935. The case received aid again from ERA in November and then was transferred to WPA until April, 1936. In January and February, 1937, the case was aided by the County Department of Public Welfare. Public assistance during the past two years has totaled \$318.

Beet laborer has been the usual occupation of the head for 15 years. During 1934 the beets which Mr. B. had contracted to work were dried up because of drouth so relief was needed. In 1935 he had a written contract for 23 acres but the contract was cancelled by the grower after hoeing and weeding. Mr. B. worked by the day during topping. Total earnings from beet work were \$219. Another \$60 was earned working with truck crops and potatoes. The law setting a minimum age of 14 for children working in the beet fields added to the difficulties of the B. case as all but one child was under the minimum age.

The B's have carried insurance several times in the past but have always had to let it lapse. Their assets are a small amount of furniture and a 1926 model car purchased in 1934 for \$50; they are in debt \$146 for groceries, clothing and doctor bills.

The B's have been cooperative with representatives of the public assistance agencies, have tried to secure employment and have reported what employment was obtained; Mr. B. has always indicated when he had enough work to not need aid, or when only supplemental help was required.

The C. Non-relief Case - The C. case, which has never received public assistance, has four members, the male head, aged 54; wife, aged 44; and two sons aged 17 and 16. All were born in Mexico, moved to Weld county in 1919 and have lived in the same place for the past five years.

Mr. C. has never attended school and the wife has completed only the equivalent of third grade and cannot speak, read or write English; the two sons are both attending high school.

The three-room house which has a basement, is owned. It is in good condition and is equipped with electric lights, electric washing machine and iron, and radio. The floors are covered with linoleum.

Mr. C. has been a beet laborer for 20 years. During the 1935 season he had a written contract for 90 acres of beets. Extra labor had to be hired to fulfill the contract because there were only three persons in the family to work. Over \$700 was cleared from the beet contract. About \$250 was also earned by the three men working by the day as farm laborers when not needed at beet work.

The C's have a garden and can considerable of the produce. They also raise a pig to butcher. They subscribe to a daily and weekly newspaper, own a 1934 model car purchased new, and have savings in the bank. The case is reported as being cooperative, energetic and trying to get ahead.

Appendix A.

METHODOLOGY

The universe from which the sample of 231 rural Spanish-speaking beet laborer cases was taken for this survey was decided by the "Survey of Current Changes in the Rural Relief Population" which had been conducted in Weld county for the period February through November, 1935, by the FERA Division of Research, Statistics and Finance in Cooperation with Colorado Agricultural Experiment Station. In this previous survey schedules (DRS-109) had been filled for 50 per cent of all rural cases on emergency relief, in the county each month during the survey period. This sample included approximately half of the Spanish and Mexican cases on relief whose usual occupation was beet laborer or who left the emergency relief rolls to take such work. Half of these cases were selected as the sample for the present study. The sample was "controlled" to get a representative group according to month of closing from emergency relief and according to place of residence at the time, open country or village. This was done, for example, by taking the March closed cases, sorting them according to residence, and then taking each alternate case; the process was repeated for each succeeding month through October. The same was done for cases receiving relief in October, thus giving approximately a 25 per cent sample of all Spanish-speaking beet laborer cases who received public assistance during the period February through October, 1935.

A schedule was then filled for each case, still resident in the county, by personal interview by field workers who had been case workers with the ERA program. Data from the DRS-109 schedule used for the previous survey was available for checking purposes. Statistics of public assistance were secured from ERA records, the county auditor, and Federal Surplus Commodities Corporation records. School attendance records were obtained from public school officials. In April, 1937, the data on public assistance was extended through February, 1937, by the use of records from WPA and the County Department of Public Welfare.

Appendix B.

BEEET ACREAGE HARVESTED

Year	<u>Weld County*</u>	<u>Colorado**</u>	Year	<u>Weld County*</u>	<u>Colorado**</u>
1926	81,860	211,000	1931	85,263	224,000
1927	86,400	218,000	1932	61,399	156,000
1928	53,600	179,000	1933	77,230	209,000
1929	82,350	210,000	1934	63,020	169,000
1930	<u>92,340</u>	<u>242,000</u>	1935	<u>57,212</u>	<u>140,000</u>

Five year average, 1931 - 35 68,825 179,600

Ten year average, 1926-35 74,067 195,800

*Data supplied by F. K. Reed, Colorado Agricultural Statistician

**Colorado Agricultural Statistics, 1935; United States Department of Agriculture and Colorado State Planning Commission, p. 61.

Appendix C.

STANDARDS OF LIVING

Consumption Units - A household of five persons consisting of three adult men aged 25-35 and two adult women aged 25-30 is not comparable to a household of five consisting of a man aged 65, a man of 35 and woman of 30 and two children aged 4 and 8. For comparative purposes it is therefore necessary to work out a scale which will take the age and sex variations into consideration, particularly when food consumption is studied. The scale given below takes the consuming power of one male aged 18-59 at moderate muscular work as equivalent to one consuming unit and allots comparable relative weights to other persons of different age or sex*

Table I. Consumption Unit Scale

Age in Years	Weights in Terms of Adult Male		
	Child	Boy or Man	Girl or Woman
1	.4		
2	.5		
3	.55		
4	.6		
5	.65		
6	.75		
7	.75		
8	.8		
9	.8		
10	.85		
11		.95	.85
12		.95	.95
13		1.0	1.0
14		1.0	.95
15		1.05	.9
16		1.05	.85
17		1.1	.85
18 - 59		1.0	.95
60 and over		1.0	.9

* Adapted from scale for weighting food consumption published by E. L. Kirkpatrick, Rosalind Tough and May L. Cowles in "How Farm Families Meet the Emergency", Wisconsin Agricultural Experiment Station Bulletin 126.

Costs Per Consumption Unit - The addition of consumption units to a household does not result in a proportionate increase in the cost of living because cost for fuel and shelter may be little or no extra and there may not be a proportionate increase in cost of food. This relationship is demonstrated by Table II.

Table II. Cost of Living Compared With Consumption Units Per Household

Consumption Unit Groups	Number of Cases	Average Number Consumption Units	Average Cost per Consumption Unit
All Groups	176	4.7	\$120
1 - 1.99	19	1.9	197
2 - 2.99	32	2.56	178
3 - 3.99	35	3.52	120
4 - 4.99	18	4.53	123
5 - 5.99	15	5.57	121
6 - 6.99	21	6.51	102
7 - 7.99	19	7.48	103
8 - 8.99	11	8.6	90
9 or more	6	9.45	95

Food Consumption - Because of fluctuations in the price of food, the most important single item in the cost of living for these cases, and because some of the furnished food was valued at less than retail prices by the public agency disbursing the commodities, an attempt was made to secure data on the quantity of food consumed. It is recognized that such data secured by the survey method is only approximately accurate and that there is no basis for correcting for errors. Comparison of food consumption found in other studies by the survey and actual record keeping methods reveals that the survey method usually gives somewhat greater quantities, especially for farm families, than the actual records.* It is not known whether the estimates of this study are above or below actual consumption which would be found by a day to day record but the results are fairly comparable with the findings in other similar studies.

As a possible rough indication of the adequacy of the food consumed, some of the more important items are compared, on the basis of quantity per consumption unit, with the standard set up by the Bureau of Home Economics of the United States Department of Agriculture for an adequate diet at minimum cost for a moderately active man.

* Hawley, Edith "Economics of Food Consumption", p. 302.

Table III. Annual Food Consumption

Item	Unit	Average Per Consumption Unit	Quantity for Moderately Active Man* Adequate Diet at Minimum Cost
Flour, Cereals	pounds	Total 413	260
flour	pounds	256	
corn-meal	pounds	130	
macaroni and spaghetti	pounds	11	
cereals	pounds	16	
Milk or its equivalent	quarts	Total 80	182
milk	quarts	38	
milk	cans	39	
cheese	pounds	6	
Potatoes	pounds	215	160
Dried beans, peas	pounds	50	40
Tomatoes, citrus fruits	pounds	-	50
tomatoes	pounds	3	
oranges and lemons	dozen	4	
Leafy, green and yellow vegetable	pounds	16	75
Dried, fruits	pounds	9	30
Other vegetables, fruits	pounds	96	100
Fats	pounds	Total 44	65
cooking fats	pounds	38	
butter	pounds	5	
butter substitutes	pounds	1	
Sugars	pounds	58	60
Meat, poultry, fish	pounds	35	75
Eggs	dozen	13	12

* H. K. Stiebeling and M. M. Ward "Diets at Four Levels of Nutritive Content and Cost", U. S. D. A. Circular No. 296.