



Full Time Hired Labor on Alabama Dairy Farms

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Full Time Hired Labor on Alabama Dairy Farms¹

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DAIRYING IS A MAJOR AGRICULTURAL enterprise in Alabama, with milk sales ranking eighth as a source of cash farm income in 1974. Total cash receipts for milk, which was practically all Grade A milk sales, sold by Alabama farmers amounted to \$69 million that year (7).

Number of Grade A dairies in the State has declined over 50 percent in the past decade to a total of 567 in late 1974 (2). The reduction was a continuation of a long-term trend to fewer but larger production units. The average Alabama dairy of about 120 milking cows has reached a size so that family labor supply is usually inadequate and full-time hired labor is employed. Dairy farmers are experiencing new management problems as they become more dependent on hired labor.

In 1971 a study of the use of full-time hired labor on Alabama dairy farms was initiated. It was estimated that dairymen were paying \$5.5 million, or about 8 percent of dairy income, for full-time hired employees. In 1971, there were 750 Alabama Grade A dairies on which an estimated 1,300 workers were employed, or over 6 percent of the total full-time hired workers on Alabama farms.

The labor study conducted in 1971 is reported herein. In the past 3 years agricultural wages have risen substantially. Between 1971 and January 1975 the average farm wage rate per day (with-

¹ This study was conducted under project Hatch 326, supported by State and Federal funds.

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out board or room) rose from \$9.30 to \$13.80, or 48 percent (8). However, even with a dramatic increase in wages, the relative position of farm wages to non-agricultural wages paid in Alabama has not been materially altered. Although the agricultural wage information reported here is dated, wage relationships and management findings are still relevant.

With relatively low farm wages as compared to non-farm wages, and an apparent decrease in the supply of quality farm labor, it appears that labor has become one of the greatest problems facing Alabama dairymen. Looking at the dairy labor problem from the individual farmer's viewpoint, it has become one of the operator having difficulty acquiring and retaining qualified full-time employees at existing farm wage rates.

In seeking solutions to labor problems, Alabama dairy farmers have tried several alternatives. Some left dairying because of inadequate labor. Other dairymen expanded as a means of solving their labor problems. Even though the number of milk cows on Alabama dairy farms declined from 139,000 in 1968 to 120,000 in 1971, production per cow and average herd size increased substantially, increasing total Grade A milk sales by 11 million pounds (1). Much of the decline in cow numbers can be attributed to a decrease in number of milk cows kept for family use.

The decision to expand a dairy herd is of major significance to farmers because it generally involves substantial investments in buildings and equipment and a long-term commitment to dairying. Such a decision hinges not only on available capital but also on the labor requirements of the proposed change and the expected supply of labor. Further, some dairymen reported that labor problems increased after expansion occurred.

Another alternative tried by a few dairymen was to reduce herd size to the point where the dairy became entirely a family operation. This procedure apparently proved unsatisfactory, however, because such dairymen found they were unable to generate the required family income on the smaller operation. Some dairymen have worked part-time off the farm to supplement the dairy income and others have gone out of business completely.

PURPOSE

The problem of obtaining and retaining dairy labor has been particularly crucial on Alabama dairy farms. Continued growth

and development of the Alabama dairy industry are dependent to a large degree on an adequate supply of qualified full-time hired labor. The quality of farm labor and the capabilities of management are major determinants in achieving higher productivity per man hour, holding a farm labor force, and competing with non-agricultural job opportunities. Information about the characteristics of hired laborers, their skill levels, job content, and the types of farms and farmers employing hired laborers will assist in dairy adjustments. Specific objectives of the study were: (1) To determine trends relating to the use of full-time labor and to describe the labor force and organization on Alabama dairy farms; (2) To analyze factors affecting supply of full-time hired labor; and (3) To determine successful labor management practices used by dairy farmers.

PROCEDURE

A questionnaire was administered to 60 dairymen during the summer months of 1971. Personal interviews were used to gain knowledge not only of full-time hired labor but also knowledge about the total farm operation. Information was obtained about the farmer, land use patterns, livestock and production, milking facilities, feeding facilities, family labor, and full-time hired labor. The last section of the questionnaire was a management evaluation section included to determine the dairyman's ability as a labor manager.

In the study, the State was divided into three regions: north, central, and south with the central region being the Black Belt counties, Figure 1. The decision to divide the State into three major areas was based on prior studies of production characteristics (4,5).

Sixty dairymen located in seven counties were selected to be interviewed. To increase the probability that dairymen within counties selected would hire full-time labor, production records were studied, and all dairies with milk sales of more than 300,000 pounds during the 6-month base building period of 1970-71 were included in the sample.³ Milk sales records available from the Dairy Commission were the best available indicators of the size of operation and probable use of hired labor. This selection pro-

³ Dairymen in Alabama earn a milk base or quote based on shipments during September through February.

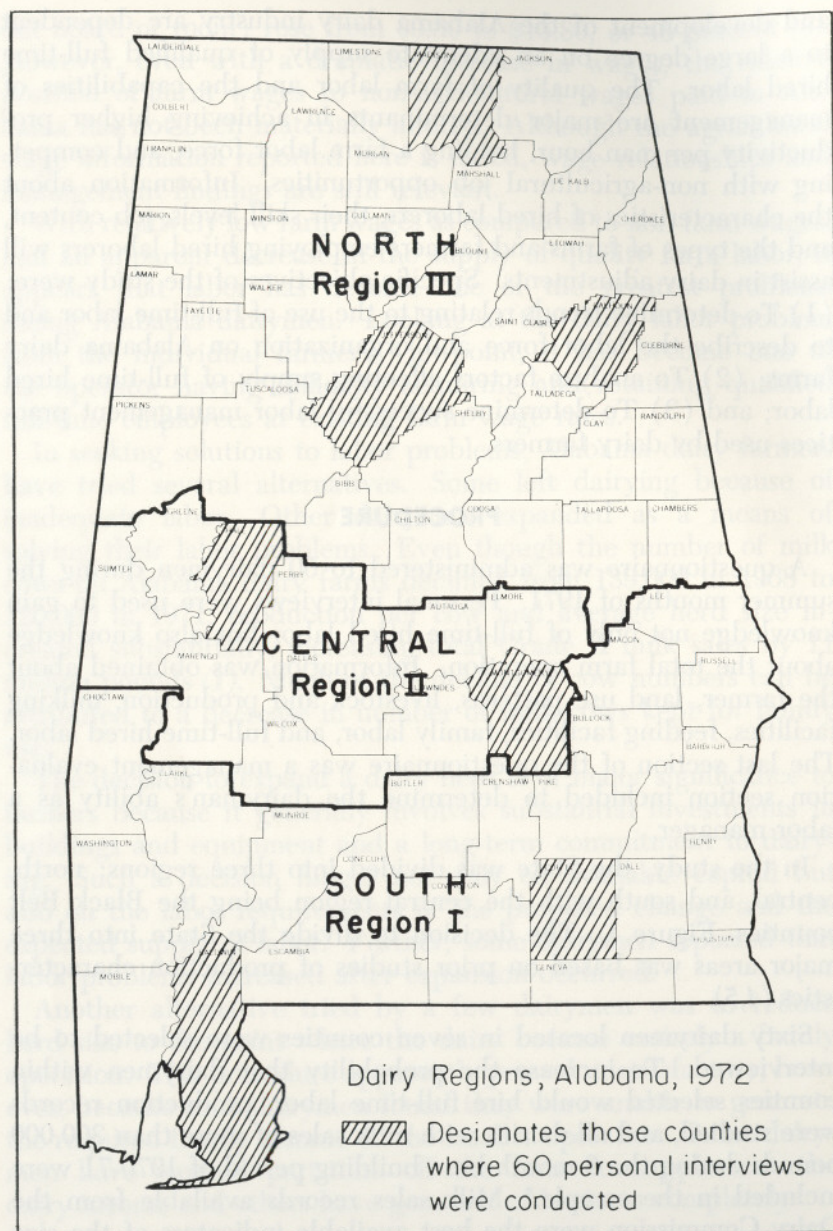


FIG. 1. Dairy Regions, Alabama, 1972.

cedure biased the sample toward larger units, however, farms with low annual production (and small herds) would primarily be family units employing only family labor. The number of dairymen interviewed varied by county and region, Table 1.

DEFINITION OF TERMS

The following terms will be used throughout this study:

Full-Time Labor: In this study a full-time laborer will be defined as a person who is employed 200 or more days per year and who works 30 or more hours per week.

Family Labor: Family labor is all relatives (wife, children, parents, nephews etc.) employed on the farm regardless of the number of days employed per year or the number of hours worked per week.

Operator Labor: Operator labor refers to the time worked by the owner in the actual dairy operation. In the case of an incorporated dairy, this term applies to the president or manager of that farm.

Perquisites: Perquisites are defined as all benefits, in addition to cash wages, provided to the employee by the farmer. Examples of these are utilities, housing, milk and food, Social Security, Workmen's Compensation, hospital insurance, and cash bonuses.

Cash Wage: It is the actual cash wage (take-home pay excluding perquisites) paid the employee.

DESCRIPTION OF ALABAMA GRADE A DAIRY OPERATIONS

In this analysis, a description of Alabama Grade A dairy operations is given by production regions. Tables show averages and ranges for selected variables derived from the 60 personal interview questionnaires.

TABLE 1. NUMBER OF SURVEY SCHEDULES COMPLETED BY REGION, ALABAMA, 1971

Region	Total number of dairymen	Percentage of total	Personal interviews	
			Number	Percentage of total
South	No. 148	Pct. 21.3	No. 14	Pct. 23.4
Central	199	28.7	23	38.3
North	347	50.0	23	38.3
State	694	100.0	60	100.0

GEOGRAPHIC LOCATION

In 1971, there were 750 Alabama Grade A dairy units licensed by the Milk Control Board selling milk for use in the State, Figure 2. This was 12 percent less than in 1969 and about 62 percent less than in 1958. Only two counties in Alabama showed an increase in the number of Grade A dairy units from 1969 to 1971.

Nineteen of the State's 67 counties accounted for 71 percent of all Grade A dairies. Twenty-one counties had less than five dairies and no units were reported in eight counties.

Operator Characteristics

The average age of dairymen was 48 years, Table 2. Dairymen in the southern and northern regions averaged 45 years while the average age of producers in the central region was 54 years. A 1969 study of Alabama dairymen by Long reported older dairymen in the central region (5). At that time, the average age was 46 years.

TABLE 2. CHARACTERISTICS OF THE OPERATORS OF DAIRY FARMS, BY REGION, ALABAMA, 1971

Item and unit	South I	Central II	North III	State
Dairymen; number	14	23	23	60
Age; years				
Minimum	30	27	28	27
Maximum	60	81	61	81
Average	45	54	45	48
Education; years				
Minimum	7	6	5	5
Maximum	20	18	17	20
Average	13	13	13	13
Operated present dairy; years				
Minimum	2	2	5	2
Maximum	23	52	37	52
Average	12	22	18	18
Total farm experience; years				
Minimum	8	6	5	5
Maximum	36	52	37	52
Average	18	28	21	23
Operators living on farm; pct.	71	91	87	85
Operators employed off the farm; percentage	29	22	26	25
Dependents; number				
Minimum	2	1	1	1
Maximum	7	8	8	8
Average	5	5	4	5

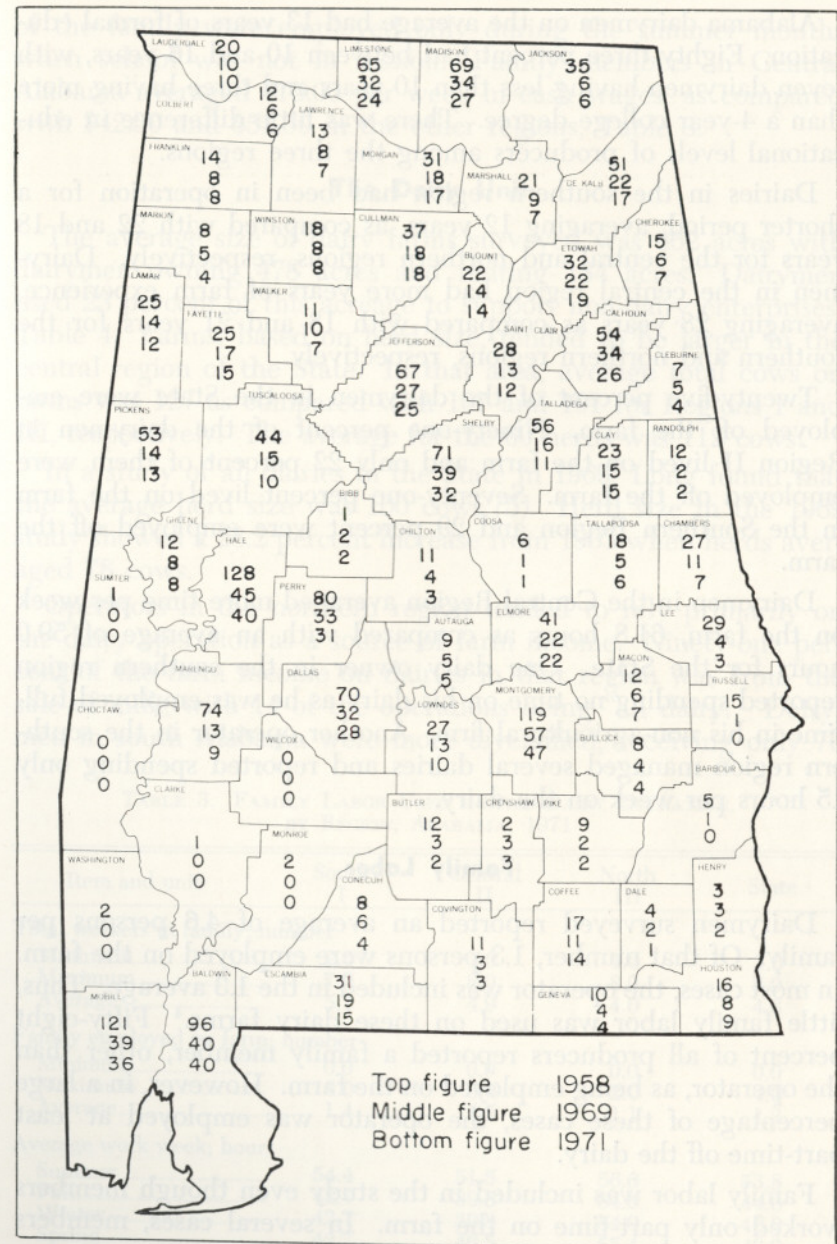


FIG. 2. Number of Grade A Milk Producers licensees of the Alabama Milk Control Board, by counties, Alabama, 1958, 1969, 1971.

Alabama dairymen on the average had 13 years of formal education. Eighty-three percent had between 10 and 16 years, with seven dairymen having less than 10 years and three having more than a 4-year college degree. There was little difference in educational levels of producers among the three regions.

Dairies in the southern region had been in operation for a shorter period, averaging 12 years, as compared with 22 and 18 years for the central and northern regions, respectively. Dairymen in the central region had more years of farm experience, averaging 28 years as compared with 18 and 21 years for the southern and northern regions, respectively.

Twenty-five percent of the dairymen in the State were employed off the farm. Ninety-one percent of the dairymen in Region II lived on the farm and only 22 percent of them were employed off the farm. Seventy-one percent lived on the farm in the Southern Region and 29 percent were employed off the farm.

Dairymen in the Central Region averaged more time per week on the farm, 61.8 hours as compared with an average of 59.0 hours for the State. One dairy owner in the southern region reported spending no time on his dairy as he was employed full-time in his non-agricultural firm. Another operator in the southern region managed several dairies and reported spending only 15 hours per week on the dairy.

Family Labor

Dairymen surveyed reported an average of 4.6 persons per family. Of that number, 1.3 persons were employed on the farm. In most cases, the operator was included in the 1.3 average. Thus, little family labor was used on these dairy farms.⁴ Fifty-eight percent of all producers reported a family member, other than the operator, as being employed on the farm. However, in a large percentage of these cases, the operator was employed at least part-time off the dairy.

Family labor was included in the study even though members worked only part-time on the farm. In several cases, members

⁴ Farms for this study produced over 300,000 pounds of milk during the 6-month 1970-71 base building period. Therefore, farms analyzed were large dairies within the selected counties. Dairies utilizing only family labor are usually smaller operations and were not included in this study.

of the family were employed only during the summer months when school was not in session. Family members in Central Alabama averaged \$75.00 per week in cash wages, as compared with \$42.50 and \$51.50 in the other regions, Table 3.

The Dairy Unit

The average size of dairy farms surveyed was 662 acres with dairymen owning 478 acres and renting 184 acres. Dairymen used 23 percent of this acreage to support non-dairy enterprises, Table 4. Farms, based on herd size, tended to be larger in the central region of the State. In that area, average total cows on farms was 127 as compared with 107 and 101 for Regions I and III, respectively. The average for the 60 herds was 112 cows.

In a study of all dairies in the State in 1969, Long found that the average herd size was 100 cows (5). Herd size in the 1969 study showed a 28.2 percent increase from 1963 when herds averaged 78 cows.

Operators in the northern region tended to rely primarily on the dairy operation as a source of farm income. Ninety-one percent of the farm income on dairies in that region was from the sale of milk, with 14 of the operations being "all dairy." Dairymen in south Alabama were more diversified, receiving only 70

TABLE 3. FAMILY LABOR USED IN THE DAIRY OPERATION, BY REGION, ALABAMA, 1971

Item and unit	South I	Central II	North III	State
Total workers in family; number				
Minimum.....	2.0	1.0	1.0	1.0
Maximum.....	7.0	8.0	8.0	8.0
Average.....	5.1	4.9	4.0	4.6
Family employed on farm; number				
Minimum.....	0.0	0.0	0.0	0.0
Maximum.....	4.0	3.0	2.0	4.0
Average.....	1.4	1.5	1.1	1.3
Average work week; hours				
Summer.....	54.4	51.5	56.6	53.8
Fall.....	42.7	39.8	54.0	44.6
Winter.....	42.7	39.8	54.0	46.0
Spring.....	42.7	46.5	55.4	48.0
Family pay per week; dollars				
Minimum.....	\$25.00	\$ 00.00	\$ 20.00	\$ 00.00
Maximum.....	\$60.00	\$125.00	\$100.00	\$125.00
Average.....	\$42.50	\$ 75.00	\$ 51.50	\$ 64.40

TABLE 4. SELECTED CHARACTERISTICS OF 60 DAIRY FARMS SURVEYED, BY REGION, ALABAMA, 1971

Item and unit	Region			60 farms
	South I	Central II	North III	
Number surveyed; number	14	23	23	60
Size of farm; acres				
Owned	523	485	441	478
Rented	232	167	170	184
Total	755	652	611	662
Size of herd; number				
Dry cows	25	33	25	28
Milking herd	82	94	76	84
Total	107	127	101	112
Percentage of farm income from dairying; pct.	70	87	91	84
Type of milking facility; number				
Parlor	10	6	17	33
Stanchion	4	17	6	27

percent of their total farm income from dairying. Only three of the 14 farms included in the study in south Alabama were classified as "all dairy."

Non-dairy farm income was from crop and other livestock enterprises. Crops were the leading non-dairy enterprise in south Alabama while non-dairy livestock enterprises were more frequently found on dairies in the other regions.

Almost half of the dairymen mixed dairy rations on the farm. Fifteen of the 60 dairymen indicated that no artificial insemination was used. Of those using artificial insemination, about half hired the service while on the rest of the farms someone was trained as an inseminator, usually the operator.

Parlors were the predominant kind of milking facility used in Regions I and III with 73 percent of all parlors being the walk-through type. In central Alabama about three-fourths of the milking facilities were stanchion barns. The age of the facilities in this area tended to be older since dairies there had been in operation for a longer period of time.

Parlors averaged six stalls per facility with the larger barns being found in Region III. Eighty-one percent of the stanchion barns used by the dairymen were equipped with pipelines while 19 percent used the bucket system.

Hired Labor

For herds of less than 75 cows, Alabama dairymen surveyed used an average of 3.3 full-time men in the operation Table 5. Full-time hired labor provided 54.5 percent of the total full-time labor utilized on these operations. As herd size increased, hired labor furnished a greater percentage of the total labor requirements of the farm. For herds larger than 199 cows, hired labor furnished 72.8 percent of the total full-time labor based on man-equivalents.

Almost all dairymen indicated that part-time help was employed during the rush seasons — silage harvest, grain harvest, and planting. Part-time workers were especially needed on diversified operations. In most cases part-time workers were school boys or men employed full-time in non-agricultural jobs. Even though supplementary labor was a necessity during some seasons of the year, only a small percentage of the total annual labor requirements was furnished by this source. Part-time workers were excluded from this study.

Seventy-six percent of all hired labor on Alabama dairy farms were employed as milkers, Table 6. In most cases, milkers were re-

TABLE 5. NUMBER OF FULL-TIME WORKERS AND PERCENTAGE OF LABOR REQUIREMENTS SUPPLIED BY OPERATOR AND HIRED LABOR ON DAIRY FARMS, BY HERD SIZE, ALABAMA, 1971

Herd size	Full-time hired labor		Operator and family labor		Total full-time labor
	Number	Percent of total labor	Number	Percent of total labor	
Less than 75	1.8	54.5	1.5	45.5	3.3
75-99	2.0	60.6	1.3	39.4	3.3
100-149	2.4	63.2	1.4	36.8	3.8
150-199	3.3	71.7	1.3	28.3	4.6
200 and over	5.1	72.8	1.9	27.2	7.0

TABLE 6. NUMBER OF FULL-TIME HIRED LABORERS PER DAIRY FARM, BY REGION, ALABAMA, 1971

Item	South I	Central II	North III	State
	No.	No.	No.	No.
Total workers	2.8	2.7	2.1	2.5
Milkers ¹	1.9	2.3	1.4	1.9
General farm hands ²	.9	.4	.7	.6

¹ Milker included those full-time hired laborers employed to work in the milking barn only.

² Includes those persons employed to work outside the dairy barn.

sponsible for barn chores only. They spent little time on the farm except in preparation, milking, and clean up.

The remaining workers were classified as general farm hands. These people worked outside the milking barn. Farm duties included feeding calves and dry cows, driving tractors, planting crops related to the dairy enterprise, and in cases where the farmer had other enterprises on the farm, working with these enterprises. Farms classified as "all dairy" averaged employing less than one worker per farm for chores outside the milking barn. In most cases the operator and his family did the outside work.

DESCRIPTION OF DAIRY EMPLOYEES

A total of 151 full-time hired employees were found on the 60 dairy farms surveyed. Labor information is presented relative to tenure, employee characteristics, job descriptions, hours worked, and perquisites.

Tenure

In both 1970 and 1971, an average of 2.5 full-time hired workers was employed on the 60 farms studied. Number of workers had changed relatively little over the past 5 years, Table 7.

An average turnover of 1.1 workers per farm was found between 1970 and 1971. This means that the average dairyman in 1970 experienced a 44 percent turnover⁵ of employees. The highest turnover in 1970 was in South Alabama (52 percent) as compared with 43 and 40 percent for Regions II and III, respectively. However, all dairymen did not experience large labor turnovers. Twenty-six producers in the three regions reported no employees having left their operations in 1970.

Only eight dairymen reported that no employees left their operations between 1966 and 1971. On the average, however, 4.1 employees per farm had taken other jobs in that time period. For the 60 dairies, the average turnover rate for this 5-year period was 164 percent.

Tenure of employees on dairy farms in 1971 averaged 6 years. Employees in the central region had been on the farms longer than employees in the other production regions, averaging 8 years

⁵ Turnover is defined as the percentage of the full-time hired work force who quit, got fired, or were otherwise separated from the payroll in a given period.

TABLE 7. HISTORICAL RECORD OF FULL-TIME EMPLOYEES ON 60 DAIRY FARMS, BY REGION, ALABAMA, 1971

Item	South I	Central II	North III	State
	No.	No.	No.	No.
Employees on farms in 1971				
Minimum	1.0	1.0	1.0	1.0
Maximum	5.0	6.0	5.0	6.0
Average	2.7	3.0	2.0	2.5
Employees on farms in 1966				
Minimum	0.0	1.0	0.0	0.0
Maximum	6.0	5.0	7.0	7.0
Average	2.4	3.2	2.1	2.6
Employees leaving farm between 1970 and 1971				
Minimum	0.0	0.0	0.0	0.0
Maximum	5.0	8.0	5.0	8.0
Average	1.4	1.3	0.8	1.1
Employees leaving farm between 1966 and 1971				
Minimum	0.0	0.0	0.0	0.0
Maximum	15.0	25.0	12.0	25.0
Average	5.1	4.4	3.2	4.1

as compared with 5 years for Regions I and III. In the central region where a parallel study of farm labor on other types of farming operations was conducted in 1971, the average tenure of employees tended to be higher than on dairy farms (3). Thirty percent of the dairy workers in Region II had been on the farm 1 year or less while 40 percent had been employed on the same dairy for 5 years or more.

Many producers experienced a large turnover for one or two of the several positions in the operation while some employees had been on the farm for several years. Tenure of the employees with many years of service off-set the high turnover rate operators experienced for one or two positions. Also, almost half of the dairymen experienced no turnover between 1970 and 1971.

Where do employees go upon leaving the dairy operation? Two-thirds of the producers interviewed stated that workers leaving their farm went to non-agricultural work, Table 8. About one-fifth of the workers leaving the dairies studied went to other dairy operations, while 15 percent found employment on non-dairy farms. Dairymen indicated that their inability to pay wages comparable to industrial wages or to provide shorter working hours were the reasons most workers leaving the farm sought employment in non-agricultural jobs.

Hired men were seldom fired. Instead, they left the dairy for what they considered to be a "better" job. A few dairymen reported that employees had been offered "better" jobs by other farmers in the local area. However, in a majority of the cases, it was reported that employees had actively sought non-agricultural work because of greater pay and shorter working hours.

Employee Characteristics

The average employee was 39 years of age with the youngest being 16 and the oldest 75, Table 9. Sixty-one percent of the workers were between 24 and 54 years old with 19 percent being

TABLE 8. EMPLOYMENT OF WORKERS LEAVING DAIRY FARMS, BY REGION, ALABAMA, 1971

Type work	South I	Central II	North III	State
	<i>Percentage</i>			
Other dairy farms.....	16	21	14	19
Non-agricultural work.....	72	73	56	66
Non-dairy farm.....	12	6	30	15
Total.....	100	100	100	100

TABLE 9. CHARACTERISTICS OF FULL-TIME EMPLOYEES ON 60 DAIRY FARMS, BY REGION, ALABAMA, 1971

Item and unit	South I	Central II	North III	State
Employees; number.....	39	63	49	151
Average age; years.....	39	38	40	39
Average formal education; years.....	8	6	7	7
Race; percentage				
White.....	74	25	76	54
Non-white.....	26	75	24	46
Marital status; percentage				
Married.....	92	57	84	75
Single.....	08	43	16	25
Average dependents; number.....	3	2	2	3
Raised on a farm; percentage.....	95	92	82	89
Occupation background; percentage				
Agricultural.....	50	94	53	69
Non-agricultural.....	50	6	47	31
Specialized training; percentage.....	10	16	14	14

less than 24 and 20 percent being older than 54. There was little difference in the age distribution of workers in the three production regions.

An average of 7 years of formal education was reported for the 151 employees. Thirteen had no formal education, 16 attended school for 12 years, and three attended college. Only one had a college degree and was employed as a herd manager. Seventy-nine percent had between 1 and 11 years of schooling. Region II workers on the average had fewer years of formal education than workers in the other regions.

Only 14 percent of the employees had any specialized training. There were no reports of any special training being obtained in trade schools. The training reported was received in military service, or in a few cases, the operator had paid for an employee to attend a special school where shortcourses were taught.

An almost equal division was found in the number of whites (54 percent) and non whites (46 percent) employed on dairy operations. However, a significant difference existed in the composition of the labor force between Regions I and III and Region II. Three-fourths of the workers in Regions I and III were white while three-fourths of the workers in Region II were black. No other races were employed on the farms sampled.

Seventy-five percent of the employees were married with an average of three dependents. Dairymen in Region II reported the lowest percentage of married employees (57 percent); 92 percent of the workers in Region I were married.

Approximately 90 percent of all employees had been raised on a farm and a large majority (69 percent) had never worked at any job other than in agriculture. About half of the employees in the southern and northern regions had worked at non-agricultural jobs while only 6 percent of the employees in Region II had ever been employed off the farm.

Dairy employees worked an average of 6 days per week, averaging 48 hours of work, Table 10. Workers in central Alabama averaged a 45-hour work week, which was somewhat less than for the other two regions. When milkers were off, either a general farm hand or the operator and his family would milk.

Wages and Perquisites

Cash wages paid dairy employees in 1971 averaged \$1.49 per hour with the highest wages being paid in the southern region

TABLE 10. HOURS WORKED, DAYS OFF, HOURLY WAGE, AND WEEKLY CASH WAGE OF EMPLOYEES ON 60 DAIRY FARMS, BY REGION, ALABAMA, 1971¹

Item and unit	South I	Central II	North III	State
Hours worked per week				
Minimum.....	30	30	30	30
Maximum.....	82	78	92	92
Average.....	49	45	50	48
Days off per week.....	1	1	1	1
Hourly cash wage; dollars				
Minimum.....	.55	.45	.68	.45
Maximum.....	3.33	2.84	3.66	3.66
Average.....	1.59	1.43	1.49	1.49
Weekly cash wage; dollars				
Minimum.....	30.00	20.00	19.00	19.00
Maximum.....	108.00	154.00	143.00	154.00
Average.....	71.97	62.00	71.00	67.51

(\$1.59) and the lowest wages being paid in Region II (\$1.43).

Hourly wage	Percentage of total workers
\$1.00 and under.....	23
\$1.01-\$1.50.....	31
\$1.51-\$2.00.....	23
More than \$2.00.....	23

On the average, workers classified as milkers earned \$.63 per hour more than those classified as general farm hands. Those workers whose job description was both a milker and general farm hand earned \$1.31 per hour, while employees doing no milking earned \$1.22 per hour. Milkers earned \$1.85 per hour.

Most dairy employees were paid on a weekly basis. Average cash weekly wage was \$67.51 with a range of \$19.00 to \$154.00.

Overtime work on a dairy farm was difficult to define. In no case did any operator consider overtime as being all hours employees worked over 40 hours per week. Operators usually considered overtime as being additional work done after normal work hours. Some operators considered a 12-hour day as being normal. On the average, 37 percent of the employees were required to work additional hours considered to be overtime by the operator, Table 11.

Dairy employees received 22 percent (\$83) of total monthly wages in perquisites, Table 12. Employees in central Alabama received the lowest percentage (19%) in perquisites as compared

TABLE 11. PERCENTAGE OF DAIRY EMPLOYEES REQUIRED TO WORK OVERTIME AND METHOD OF PAYMENT, BY REGION, ALABAMA, 1971

Item	South I	Central II	North III	State
	<i>Percentage</i>			
Overtime work required.....	41	27	47	37
Method of payment:				
Hour.....	18	32	25	26
Job.....	10	5	12	9
Day.....	10	3	10	7
No pay.....	62	60	53	58

TABLE 12. MONTHLY WAGES PAID EMPLOYEES ON DAIRY FARMS, BY REGION, ALABAMA, 1971

Item	South I	Central II	North III	State
	<i>Dollars</i>			
Cash wage.....	312	269	307	292
Perquisites.....	97	63	114	83
Total wages.....	409	332	421	375

with 24 and 27 percent for workers in the southern and northern regions, respectively.

The average total monthly wage was \$409 and \$421 for Regions I and III, respectively. Monthly wages for workers in Region II were about \$75 below the average for the other regions.

Perquisites furnished included Social Security payments, housing, milk, and utilities, Table 13. While the amount of perquisites furnished was high in some cases, on the average the total perquisites furnished per month did not equal the fringe benefits

TABLE 13. VALUE OF PERQUISITES PROVIDED EMPLOYEES ON DAIRY FARMS, AVERAGE PER MONTH, BY REGION, ALABAMA, 1971

Item	South I	Central II	North III	State
	<i>Dollars</i>			
Social Security.....	22	15	26	20
House.....	34	27	50	32
Milk.....	11	9	16	12
Electricity.....	4	6	6	5
Water.....	2	2	3	2
Other perquisites ¹	24	4	13	12
Total.....	97	63	114	83

¹ Other perquisites provided include: Workmen's compensation insurance, hospital insurance, telephone service, miscellaneous utilities, food items other than milk, and meals for employees.

received by employees in manufacturing industries. In 1968, industrial workers in the United States received \$120 in fringe benefits per month as compared with an average of \$83 for dairy workers in this study (6).

Housing accounted for the greatest value of the fringe benefits provided employees. Seventy-two percent of all employees lived on the farm, Table 14. A majority of the houses were 5-room wood frame structures, even though a few mobile homes and other types of dwelling units were used. The apparently better quality houses were found in Region III (\$50 rent value per month) while the houses of lesser quality were in Region II (\$27 rent value per month). Seventy-eight percent of all houses had an inside bath.

In about 15 percent of the cases, the farmer paid all (10.4%) of the Social Security, instead of the 5.2 percent as was required by law. The average monthly payment for Social Security was \$20 for the State, with the highest amount (\$26) being paid in the northern region where cash wages were higher.

Milk was the most common food item furnished dairy employees. Workers were given an average of \$12 in milk per month.⁶ Other food items furnished employees averaged only \$3.82 per month and included farm-grown meats and vegetables.

The two most common utilities furnished employees by dairy-

TABLE 14. HOUSING PROVIDED EMPLOYEES ON DAIRY FARMS, BY REGION, ALABAMA, 1971

Item	South I	Central II	North III	State
	Percentage			
Living on farm.....	67	92	60	72
Type house provided:				
Wood frame house.....	50	69	53	59
Mobile home.....	11	13	10	11
Block house.....	19	16	29	21
Brick house.....	8	0	5	4
Asbestos siding house.....	12	2	3	5
Bath provided.....	92	62	87	78
Type heat provided:				
Gas space heaters.....	100	55	82	75
Wood heater or fireplace.....	0	45	5	19
Electric heat.....	0	0	13	6

⁶ Milk provided employees was valued at \$.75 per gallon, which was a conservative value for raw milk.

men were electricity and water. Two farmers reported paying for the employee's telephone service and in a few cases the dairymen provided gas for heating. Other utilities provided averaged \$5.00 per month.

Farmers in general were getting away from the practice of providing meals for employees. Dairymen reported that they provided an average of two meals per month at a total value of \$1.87.

Three producers provided six employees with hospital insurance. The average cost to the dairymen per employee was \$27 per month. Only one of the 60 producers provided workmen's compensation. In a majority of the cases dairymen had liability insurance to cover any accident involving employees on the farm.

The average worker in 1971 earned \$5.28 per month in bonus and incentive payments. Fifty-eight percent of the dairymen interviewed reported the use of incentive or bonus plans. But, most were year-end Christmas bonuses. Of the seven producers reporting an incentive plan, some indicated pay for milk produced above a specified level. Other dairymen reported incentive plans based on calves raised to a specified age, bacteria count in milk, working days missed by employees per year, and heat detection.

Some dairymen had at one time tried incentive plans as a means of retaining good workers, but the plans were later dropped for lack of apparent success. Most producers using an incentive plan indicated that it applied to only one or two of the several workers on the farm.

Producers were questioned about how each worker came to be employed on the farm. Forty-four percent replied that the producer had approached the worker about prospective employment. Twenty-six percent of the employees had gone to the dairyman seeking a job and 11 percent had been recommended by a relative or friend. Dairymen made little use of news media (newspaper and radio) or employment agencies in attracting prospective employees. Only two employees had been obtained by a farmer's contact with an employment agency.

Fifteen percent of the producers had obtained employees by other methods. A few employees were placed on dairy farms by an agreement between the dairyman and a prison warden. In no case had a dairyman brought in workers from another country.

MANAGEMENT FACTORS

Producers ranked characteristics they desired in employees, Table 15. Two-thirds of the dairymen replied that the first choice would be a man who is "conscientious and dependable." Most of the producers included this characteristic in their first three choices.

Few dairymen saw any need to have a man on the farm who could make management decisions and several producers replied that workers were hired primarily to do the physical labor associated with dairying. Fifty-four percent ranked the characteristic "capable of making management decisions" as their fifth choice. Only 7 percent of the producers thought that this characteristic deserved top priority.

Dairymen named several other characteristics looked for in a prospective employee. Some felt that "experience" was a valuable trait while others said that a man must have "good health." Several had experienced problems with excessive drinking by workers. Employers stated that "sobriety" and "good character" were very important characteristics.

Dairymen indicated that over 90 percent of their employees in 1971 were "conscientious and dependable." Eighty-five percent were "careful with equipment" and ninety-two percent were "good with dairy cows." Employees, however, were weak in the two characteristics dairymen picked as their fourth and fifth choices. Fifty-six percent of the employees had at least some mechanical ability but only 30 percent were capable of making minor management decisions according to the farmers.

Most producers wanted the hired help to live on the farm, Table 16. Dairymen felt they had more control over hired help when they lived on the farm. If a worker failed to report for

TABLE 15. EMPLOYEES CHARACTERISTICS DESIRED BY DAIRY FARMERS, ALABAMA, 1971

Characteristic	Choice rating by dairymen				
	First choice	Second choice	Third choice	Fourth choice	Fifth choice
	<i>Percentage</i>				
Managerial ability.....	7	7	12	15	54
Mechanical ability.....	0	5	12	38	32
Conscientious and dependable.....	68	20	3	5	2
Careful with equipment.....	0	3	52	35	7
Good with dairy cows.....	22	62	13	3	0
Other.....	3	3	8	4	5

TABLE 16. ANSWERS GIVEN BY DAIRYMEN TO MANAGEMENT EVALUATION QUESTIONS, BY REGION, ALABAMA, 1971

Question	South I	Central II	North III	State
Do you want your workers to live on the farm? (Percentage answering yes).....	86	78	74	78
Would you leave the dairy with hired help to go on vacation? (Percentage answering yes).....	79	70	57	67
How long would you leave the dairy with your hired help? (Number of days).....	6	6	5	5
Would you be willing to or could you pay hired help more? (Percentage answering yes).....	46	70	70	64
How much more do you feel you could pay a good man per week? (Dollars).....	\$12.00	\$16.54	\$23.33	\$19.32
Could you give hired help more days off per week? (Percentage answering yes).....	46	39	26	36

work, the operator could more easily determine the reason.

About one-fifth of the operators preferred hired help live off the farm. Several had encouraged workers to buy a home in the local community or in a nearby town. A few dairymen seemed to be trying to make agricultural employment more like non-farm work.

One-third of the producers stated they could not leave the farm with hired hands to go on vacation. Of the dairymen who said they could go on vacation, a large majority stated they would arrange for a relative or friend to supervise the operation while they were away.

Most dairymen felt many of the labor problems could be solved if they were able to pay wages more competitive with industrial wage rates. And sixty-four percent felt that they could pay an average of about \$20.00 more per week provided "good" men were available. Most dairymen complained they were not receiving prices for milk comparable with industrial prices; therefore, they could not pay wages comparable with industrial wages.

Dairymen stated they could not compete with industry in time off. Several dairymen stated that while an industrial plant could be stopped over the weekend, a dairy operation had to go on 7 days a week. More time off could be given by hiring additional people, but the added expense could not be afforded.

A majority of the dairymen in the State provides no paid vacation for employees, Table 17. Seventy-five percent of the employees in the central region received no paid vacation, while 62 percent of the employees in the southern region received 1 week's paid leave. Eight percent of all employees received 1 week without pay and only 4 percent received a 2 week's paid vacation.

Wage Determinants

Ordinary least squares techniques were employed to analyze and measure quantitatively the influence of several selected independent variables upon wages of full-time hired employees. Total monthly wage which measured cash wages and perquisites was used as the wage variable.

Fifteen independent variables, which were hypothesized to be determinants of earnings, were used in the wage models. These independent factors and their units of measurement in the analyses were as follows:

<i>Variable factors</i>	<i>Unit of measurement</i>
Age of worker.....	years
Education of worker.....	years
Age of farm operator.....	years
Education of farm operator.....	years
Operator years farmed.....	years
Tenure of worker.....	years
Cows per worker.....	number
Total farm acreage.....	acres
Percentage of farm dairy.....	percent
Employee job description.....	milker, general farm worker, other
Residence of employee.....	off farm, on farm
Race of employee.....	white, non-white
Specialized training.....	none, specialized training
Worker turnover rate (past 5 years).....	percent

TABLE 17. VACATION PROVIDED EMPLOYEES ON DAIRY FARMS, BY REGION, ALABAMA, 1971

Vacation	South I	Central II	North III	State
	<i>Percentage</i>			
No paid vacation.....	28	75	45	52
One week paid.....	62	17	41	36
Two weeks paid.....	0	0	8	4
One week without pay.....	10	8	6	8
Total.....	100	100	100	100

Regression analyses are presented which show the relationship and significance of the selected variables to monthly total wages, Table 18. Regression equations were developed for all hired workers in the study and by region in the State.

In the monthly wage equation where the 151 workers in the study were included, little of the variation in wages (19 percent) was associated with changes of the independent variables. Of the 14 variables in the equation, race, cows per worker, and specialized training were significant. Variations in the other factors were not considered significant determinants of cash wages in this equation. White workers received \$40.29 more pay per month than non-white workers. However, race was not a significant factor in any of the region models. Workers with some type of training relative to their farm employment were paid \$55.30 more per month than the other employees. The cows per worker variable was significant with the addition of one cow per worker raising total wages \$1.41 per month. Although none of the remaining variables was significant in the all-workers equation, some were in one or more of the region equations. Variables not significant in any equation were operator's age, worker's age, worker's education, worker tenure, worker turnover rate and operator's years farmed.

The region equations were more successful in explaining wage variation than the all-workers equation. Sixty percent of the wage variation was explained in the southern and northern areas, and 33 percent in the central part of the State; however, few of the independent variables in these equations were significant. Of all the variables considered only specialized training was significantly related to wages in more than one equation. In the southern and northern regions these workers were paid substantially more wages than the other farm workers. Training was not a significant factor in central Alabama.

In the northern area five variables were significantly related to wages — residence, specialized training, job description, farm acreage, and operator's education. In this equation operator education was found to be negatively associated with wages. Average education of operators in the north area was 13 years and an additional year of education resulted in \$18.70 less wages paid hired employees per month. Workers living off the farm received \$141.97 more than on-farm residents. In total, the regression analyses were not very successful in explaining wage varia-

TABLE 18. REGRESSION EQUATIONS OF SELECTED FACTORS ON TOTAL MONTHLY WAGES PAID FULL-TIME HIRED WORKERS ON 60 DAIRY FARMS, ALABAMA, 1971

Model	A ¹ value	Operator education	Years farmed	Operators age	Total acreage	Percentage income from dairy	Time employed	Workers age	Workers education	Dollars	
										Residence ⁴	Job description ²
										Milker	Other
All workers	184.95 (86.850) ⁵	2.622 (3.788)	.989 (1.372)	-.891 (1.235)	.016 (.013)	8.749 (53.154)	-.100 (1.352)	.451 (.689)	4.556 (2.783)		
Region:											
South	242.720 (173.852)	-10.817 (9.872)	-.569 (3.442)	2.119 (1.821)	.003 (.023)	253.659* (130.527)	1.861 (2.134)	-.548 (1.054)	-6.105 (4.308)		
Central	285.797 (160.591)	8.623 (6.461)	3.435 (3.130)	-4.423 (2.822)	-.028 (.064)	-91.877 (104.416)	.495 (2.203)	1.195 (1.209)	7.740 (5.550)		
North	325.315 (172.717)	-18.698* (7.241)	3.640 (3.276)	-.257 (2.560)	.046* (.026)	172.204 (117.877)	1.201 (2.871)	.498 (1.148)	5.411 (4.778)		
Model	Race ¹	Residence ⁴	Job description ²		Cows per worker	No specialized training ⁴	Worker turnover rate	R ²	Observations in the equation		
All workers	40.288* (19.566)	-20.752 (20.837)	Milker 21.179 (20.502)	Other 9.841 (35.616)	1.408* (.683)	-55.297* (25.713)	.004 (.046)	.19	151		
Region:											
South	47.804 (35.832)	45.391 (33.097)	22.290 (30.084)	-83.748 (59.492)	1.926 (1.391)	-92.815* (46.814)	-.040 (.060)	.60	38		
Central	33.858 (35.763)	-50.212 (35.941)	76.011* (44.099)	69.125 (70.030)	-.825 (1.524)	-26.346 (45.328)	.296 (.277)	.33	64		
North	-2.403 (38.965)	141.971* (37.111)	-1.624 (33.027)	108.128* (58.017)	1.376 (.946)	-109.303* (43.784)	-.069 (.089)	.60	49		

* The variable is significant at the .10 level or higher.

¹ The A value is the intercept or the value of total monthly wages when all variables considered are zero.

² Three job descriptions were considered: general farm hand; milker; worker who does both. The general farm hand was the classification against which milkers and other workers were compared.

³ R² is the coefficient of multiple determination. It is the percentage of variation in total monthly wages explained by the variables considered.

⁴ These coded variables were entered as race (white), residence (off farm) and specialized training (none).

⁵ Standard errors of the coefficients.

tion. Even though the region models gave larger coefficients of multiple determination, few of the independent variables were significant except in the northern region.

Management Analysis

Almost as many different labor practices were found as dairies studied. To a degree, solutions to labor problems differ for individual operations; however, some common observations can be made about the use of hired labor.

Problems of labor turnover have increased in recent years. Although some employees had worked on the same farm most of their adult life, a large proportion of the workers left dairying after a few months. In between 1970-1971 the dairymen studied experienced a 44 percent labor turnover.

The disparity between agricultural wages and industrial wages and benefits had drawn workers to non-farm employment. Dairy workers have become more attuned to mass media influence and the realization of more desirable employment alternatives. Thus, dairymen were frequently left with the less qualified and immobile workers.

The approach to the use of hired labor by farmers often has been to employ as little labor as possible and pay minimum wages. This practice may be changing as dairymen were found to be more competitive in the labor market in 1971 than average farm wage rates paid by other Alabama farmers.⁷

Even though many dairymen stated they could not afford to pay a competitive wage, it is essential that a better pay package be offered than was being received by the average worker in this study. The farm labor-industrial wage gap must be narrowed if dairymen are to hire and retain more qualified workers.

In seeking ways to provide better pay for dairy labor, farmers should first examine their operation for opportunities to increase production efficiency. In Alabama, expanded milk production per cow may offer the best opportunity to reduce cost per hundred pounds of milk produced. Increased efficiency and production may result from changes in the feeding program, breeding and calving programs, herd health, as well as changes in herd size to better utilize farm resources. Also, dairymen should ex-

⁷ Average Alabama farm wage rates per hour without board or room was \$1.32 in 1971 (8). The average hourly rate excluding perquisites paid by dairymen was \$1.49.

amine their seasonal pattern of milk production. Frequently, milk income can be increased by adjusting production to more nearly match market needs.

This study revealed that some dairy labor was probably incapable of employment in non-farm jobs. Many dairymen expressed the feeling that some employees were a liability rather than an asset. However, apparently there were dairy chores for workers generally not qualified for non-farm employment, particularly if the chores were designed for the individual worker.

One problem recognized in the interviews with dairymen was the need for improved personnel management on the farm. Although some management factors can be measured quantitatively, others were intangible such as the ability of the operator to manage employees. Dairymen tended to appraise labor in quantitative terms, i.e., man hours and man days, with little consideration for the quality dimension. Producers commonly stated that management was their responsibility; the worker's duty was to do physical work only. Productivity of the employee is partially a function of his work environment — an environment the dairy owner creates. Competitive wages and fringe benefits fill the security and physical needs of the worker. Other needs should be considered if the dairyman is to maintain a satisfactory labor force. An employee should have pride in his job and in his relationship to other people in the community. Dairymen can help accomplish these goals by developing management capabilities of workers and assigning additional responsibilities.

According to dairymen, some employees either did not accept responsibility or were capable of handling only simple tasks. However, every worker has the capacity for accepting responsibility for certain tasks. It is the dairyman's job as a manager to find the jobs where the worker can best function. If the worker is not interested in dairy work and is unwilling to accept responsibility, the dairyman is doing the worker a disservice by keeping him on the farm.

Employees often are expected to work as hard and be as highly motivated as the dairy owner. This owner expectancy is unrealistic unless the worker feels he is an important member of the dairy operation. Employees should be encouraged to feel they are important members of a successful operation.

The apparently higher level of expectations of dairy employees must be filled by the farmer in more ways than has been tradi-

tional. The following considerations are important for farmers who desire to make dairy employment attractive.

1. Since the dairy labor force is affected by the industrial labor situation, industrial rules must be considered in the recruitment of dairy labor.

2. The agricultural sector must reduce the gap that exists between wages and the total pay package of industry and that being offered in agricultural employment.

3. Special exemptions for agriculture insofar as minimum wages, workmen's compensation, and unemployment insurance are being discontinued.

4. The image of agricultural work must be changed to attract higher quality workers.

5. Alienation is a thing of the past. Failure to develop communication between the employee and the employer, as well as the employee and his community, can be a deterrent to keeping good farm workers.

6. Better personnel management on the part of dairymen is a must. A better managed and paid worker usually performs better if he likes agricultural work. Cheap labor in which the operator invests little time and money can often be expensive.

7. Dairymen must find workers willing to take some responsibility and dairymen must be willing to delegate responsibility.

8. Training, both on and off the farm, will be necessary to develop more skilled year-round hired workers who can handle modern machinery and produce enough to warrant the higher wages necessary to attract workers.

SUMMARY

Alabama dairymen are dependent on hired labor for a large proportion of their labor force. And, the trend toward larger dairy production units has necessitated a growing dependency on hired labor. The disparity of agricultural wages and working conditions as compared to non-farm employment has resulted in a decrease in the supply of qualified dairy workers. From the farmers' viewpoint, the labor problem is the difficulty of acquiring and retaining full-time employees at a wage the dairyman can afford to pay.

A survey was taken of 60 Alabama dairymen who employed 151 full-time hired workers. The average dairyman was 48 years

old, had operated the present dairy 18 years and had 13 years of formal education. Most of these farmers lived on the farm and the dairy enterprise was their major source of income. Operator and family labor as a proportion of total labor on the farm declined from about 45 percent on the smaller farms studied to 27 percent of the labor used on the dairies of more than 200 cows.

Worker turnover was 44 percent between 1970 and 1971, with the largest turnover in south Alabama. Loss of labor was not common to all farms as 23 dairymen reported that no workers had left their operations in the previous year. Only eight dairymen reported no labor turnover in the previous 5 years. In spite of the large labor loss, tenure of employees on the survey farms averaged 6 years. Many producers experienced a large turnover for one or two dairy jobs while some employees had been on the farm for several years.

Two-thirds of the workers leaving the dairies went to non-farm employment. Dairymen indicated that their inability to pay competitive wages and provide comparable benefits were the reasons most of these workers sought non-agricultural jobs. Employees worked an average of 6 days per week, averaging 48 hours of work.

The average employee was 39 years old with 61 percent of the workers between 24 and 54 years of age. They averaged 7 years of formal education. Only 15 had a high school education. Thirteen had no formal education. Relatively few had any specialized training useful for their farm responsibilities. Slightly over half the workers were white. In the Black Belt, however, three fourths of the workers were non-white. Ninety percent of the workers had been raised on a farm and about 70 percent had never worked at any job other than agriculture.

Most workers were paid weekly. Average weekly cash wages was \$67.57 in 1971. On a monthly basis cash income averaged \$292, perquisites were \$83 and total wages \$375. As 72 percent of the employees lived on the farm, housing accounted for most of the value of fringe benefits.

Ordinary least squares techniques were used to examine the influence of selected variables on total monthly wages including perquisites paid hired workers. Relatively little wage variation was explained by the regression equations. Except for the specialized training variable, no other variable factor was significant in more than one wage equation. In most instances workers who

had received some training useful to their farm employment were paid significantly more than other workers. Neither worker education nor tenure was significant in any wage equation.

In addition to the need for closing the disparity of farm wages to industrial wages and benefits, dairymen can improve their labor situation through better labor management practices.

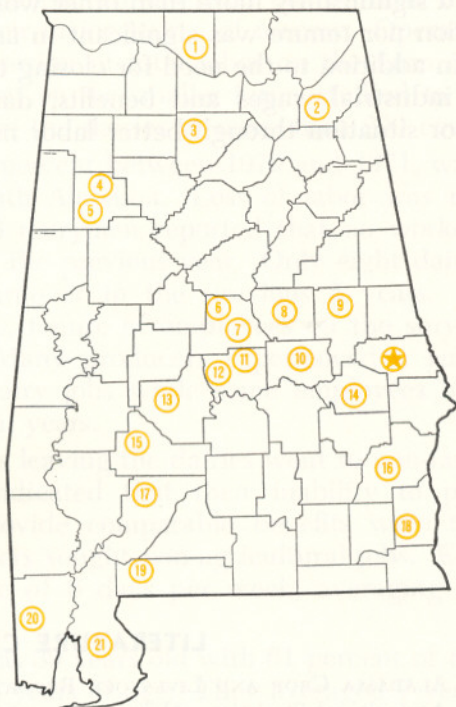
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Alabama's Agricultural Experiment Station System

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With an agricultural research unit in every major soil area, Auburn University serves the needs of field crop, livestock, forestry, and horticultural producers in each region in Alabama. Every citizen of the State has a stake in this research program, since any advantage from new and more economical ways of producing and handling farm products directly benefits the consuming public.



Research Unit Identification

★ Main Agricultural Experiment Station, Auburn.

1. Tennessee Valley Substation, Belle Mina.
2. Sand Mountain Substation, Crossville.
3. North Alabama Horticulture Substation, Cullman.
4. Upper Coastal Plain Substation, Winfield.
5. Forestry Unit, Fayette County.
6. Thorsby Foundation Seed Stocks Farm, Thorsby.
7. Chilton Area Horticulture Substation, Clanton.
8. Forestry Unit, Coosa County.
9. Piedmont Substation, Camp Hill.
10. Plant Breeding Unit, Tallassee.
11. Forestry Unit, Autauga County.
12. Prattville Experiment Field, Prattville.
13. Black Belt Substation, Marion Junction.
14. Tuskegee Experiment Field, Tuskegee.
15. Lower Coastal Plain Substation, Camden.
16. Forestry Unit, Barbour County.
17. Monroeville Experiment Field, Monroeville.
18. Wiregrass Substation, Headland.
19. Brewton Experiment Field, Brewton.
20. Ornamental Horticulture Field Station, Spring Hill.
21. Gulf Coast Substation, Fairhope.