

11
213.3

UNITED STATES DEPARTMENT OF LABOR

BULLETIN OF THE WOMEN'S BUREAU, NO. 62

**WOMEN'S EMPLOYMENT
IN VEGETABLE CANNERIES
IN DELAWARE**

[PUBLIC—No. 259—66TH CONGRESS]

[H. R. 13229]

An Act To establish in the Department of Labor a bureau to be known as the Women's Bureau

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there shall be established in the Department of Labor a bureau to be known as the Women's Bureau.

SEC. 2. That the said bureau shall be in charge of a director, a woman, to be appointed by the President, by and with the advice and consent of the Senate, who shall receive an annual compensation of \$5,000. It shall be the duty of said bureau to formulate standards and policies which shall promote the welfare of wage-earning women, improve their working conditions, increase their efficiency, and advance their opportunities for profitable employment. The said bureau shall have authority to investigate and report to the said department upon all matters pertaining to the welfare of women in industry. The director of said bureau may from time to time publish the results of these investigations in such a manner and to such extent as the Secretary of Labor may prescribe.

SEC. 3. That there shall be in said bureau an assistant director, to be appointed by the Secretary of Labor, who shall receive an annual compensation of \$3,500 and shall perform such duties as shall be prescribed by the director and approved by the Secretary of Labor.

SEC. 4. That there is hereby authorized to be employed by said bureau a chief clerk and such special agents, assistants, clerks, and other employees at such rates of compensation and in such numbers as Congress may from time to time provide by appropriations.

SEC. 5. That the Secretary of Labor is hereby directed to furnish sufficient quarters, office furniture, and equipment, for the work of this bureau.

SEC. 6. That this act shall take effect and be in force from and after its passage.

Approved, June 5, 1920.

U. S. DEPARTMENT OF LABOR
JAMES J. DAVIS, SECRETARY
WOMEN'S BUREAU
MARY ANDERSON, Director

BULLETIN OF THE WOMEN'S BUREAU, NO. 62

**WOMEN'S EMPLOYMENT
IN VEGETABLE CANNERIES
IN DELAWARE**



UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON

1927

U. S. DEPARTMENT OF LABOR
JAMES J. HAYES, SECRETARY
WOMEN'S BUREAU
MARY ANDERSON, CHIEF

BULLETIN OF THE WOMEN'S BUREAU, NO. 23

WOMEN'S EMPLOYMENT
IN VEGETABLE CANNERIES
IN DELAWARE

ADDITIONAL COPIES
OF THIS PUBLICATION MAY BE PROCURED FROM
THE SUPERINTENDENT OF DOCUMENTS
GOVERNMENT PRINTING OFFICE
WASHINGTON, D. C.
AT
10 CENTS PER COPY



UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON
1927

CONTENTS

	Page
Letter of transmittal.....	v
Introduction.....	1
Hours and wages.....	7
Earnings of timeworkers and pieceworkers.....	13
Earnings by occupation.....	15
Hourly rates.....	16
Earnings in plants with incomplete records.....	17
Working conditions.....	19
Location and buildings.....	19
Processing of canned tomatoes.....	20
General workroom conditions.....	22
Worktables.....	22
Elevated work positions.....	23
Seating.....	24
Strain.....	25
Uniforms.....	25
Lighting and ventilation.....	26
Floor drainage.....	26
Waste disposal.....	27
Sanitary and service facilities.....	27
Drinking facilities.....	28
Washing facilities.....	28
Toilets.....	28
Cannery camps.....	29
Buildings.....	30
Sanitation.....	32
Water supply.....	32
Premises.....	33
The women workers.....	33
Age.....	33
Nativity.....	34
Ability to speak English.....	34
Ability to read and write.....	34
Conjugal condition.....	35
Living condition.....	35
Occupation of chief wage earner.....	35
Number of wage earners and size of family.....	36
Industrial history.....	37
Age at beginning work.....	37
First job.....	37
Time in the trade.....	38
Number of industries engaged in.....	38

The women workers—Continued.

Industrial history—Continued.	Page
Number of jobs held during preceding year.....	39
Jobs before and after marriage.....	39
Case histories.....	39
Appendix—Schedule forms.....	43

TABLES

Table 1. Week's earnings of cannery employees, by time worked and race.....	5
2. Median earnings of cannery employees, by time worked and race.....	13
3. Extent of timework and piecework in canneries, by product, race, and (for tomatoes) occupation.....	14
4. Hourly rates of timeworkers in canneries, by product and (for tomatoes) occupation.....	16
5. Hours and earnings of tomato peelers, by cannery—plants with incomplete records.....	18

LETTER OF TRANSMITTAL

UNITED STATES DEPARTMENT OF LABOR,
WOMEN'S BUREAU,
Washington, April 18, 1927.

SIR: I have the honor to submit to you the report on women's employment in vegetable canneries in Delaware. The investigation of the canneries was conducted at the same time that we made the survey of Delaware industries, in the early fall of 1924. Realizing, however, that an analysis of the conditions of women workers in canneries is a field in which little scientific study has been made, we concluded to extend the results of this investigation beyond the group of Delaware readers. Therefore we are submitting the report of the cannery investigation in a separate bulletin.

This report, originally the work of Miss M. Loretta Sullivan and Miss Ethel Erickson, has been prepared for separate printing by Miss Sullivan.

MARY ANDERSON, *Director.*

HON. JAMES J. DAVIS,
Secretary of Labor.

WOMEN'S EMPLOYMENT IN VEGETABLE CANNERIES IN DELAWARE

INTRODUCTION

In a survey of Delaware industries made during the late summer and early fall of 1924 at the request of the Labor Commission of Delaware, the Women's Bureau included, besides factories, stores, laundries, hotels, and restaurants, establishments in the canning industry. Because of the various irregularities prevailing therein, canneries usually are not covered in state-wide surveys, but this group constitutes such an important factor in Delaware industry that the Women's Bureau, in order to give a true picture of women workers, felt it essential to visit and report upon a representative number of canning establishments.

Realizing that an analysis of the conditions of women workers in canneries constitutes a field in which little scientific study has been made, and desiring to extend the results of the investigation beyond the group of Delaware readers to interested persons throughout the country, the bureau decided to reprint those sections of the report on women in Delaware industries¹ which deal specifically with cannery workers. The study comprises discussion of the personal and industrial histories of the women and a consideration of their hours, earnings, and conditions of work. The assembling of such data for a representative number of women workers in seasonal employment in a State where it is one of the chief woman-employing industries becomes especially significant in view of the limited amount of information on this subject available at the present time.

In Delaware canning and preserving is the only industry not included in the State's regulation of working hours for women, the 10-hour day and the 55-hour week being not applicable to women engaged in seasonal work. Since the canneries visited during the course of the survey were not selected because of the existence of especially good or especially bad plant conditions, those reported upon may be considered as representative of the industry as a whole, and the irregularities in hours, fluctuations in pay, and general con-

¹ U. S. Department of Labor. Women's Bureau. Women in Delaware industries. Bulletin 58, 1927.

ditions in the plants as disclosed in the tables in the report may be said to reflect the situation encountered by women workers in the canneries of Delaware.

With the exception of the leather industry the vegetable canneries of Delaware have a larger number of women employees than has any other industry, and during the peak months of August, September, and October the representation of female workers is greater in the cannery group than in any other.²

Most of the canneries visited during the survey—20 of the 34 plants in which individual wage data were secured—were in Sussex, the southernmost county of the State. No vegetable cannery was found in Wilmington, the only city which in 1920 had as many as 10,000 inhabitants.³ The following is a list of the places in which canneries were visited during the survey. The list reveals the fact that such establishments usually were found in small towns or rural districts.

Barkers Landing	Harbeson	Newark
Blanchard	Hartley	Oak Grove
Bridgeville	Laurel	Odessa
Dagsboro	Lewes	Rehoboth Beach
Dover	Middletown	Seaford
Farmington	Milford	Smyrna
Georgetown	Millsboro	Townsend
Greenwood	Milton	Wyoming

During the late summer and fall the ripening of the tomato crop colors the landscape and industrial life of southern Delaware. Fields are fringed with rows of filled tomato baskets waiting to be carried to a neighboring cannery. On the roads are trucks and on the waterways are barges piled several tiers deep with baskets of red—splashes of brightness in their surroundings. As one travels in rural Delaware, tall, thin smokestacks, characteristic of canneries, usually are the only skyline evidence of industrial life.

According to the commercial value of Delaware's manufactured products, the canning industry ranked fifth at the time of the 1920 census.⁴ Considerable quantities of peas, corn, and beans, and small quantities of sweet potatoes, pumpkins, and fruit are canned, but the chief canned product is tomatoes. In 1924 Delaware ranked sixth among the States in the output of canned tomatoes. The National Canners' Association in its compilation of annual canning statistics

² U. S. Bureau of the Census. Fourteenth census: 1920. v. 9, Manufactures, 1919 p. 215, Table 8.

³ U. S. Bureau of the Census. Fourteenth census: 1920. v. 3, Population, 1920. p. 173, Table 10.

⁴ U. S. Bureau of the Census. Fourteenth census: 1920. v. 9, Manufactures, 1919. pp. 219, 220.

gives the following figures for Delaware: Corn 221,000 cases, peas 305,000 cases, and tomatoes 803,000 cases.⁵ According to a list submitted by the Delaware Labor Commission there were 71 canneries operating in the State in 1924. About 85 per cent of the canneries were in the two southern and rural counties—32 in Kent and 30 in Sussex. There were 9 in New Castle, the northern county.⁶

Thirty-four canneries were visited by agents of the Women's Bureau, and all but four of these were working on tomatoes during the 1924 season. Three canneries were equipped to can only corn, one was canning lima beans, and two worked alternately on corn and tomatoes.

According to estimates given by the canners, approximately 2,200 women and 1,500 men were employed in the 34 canneries visited during the peak weeks, though at the time of the survey only about 1,700 women were found there. The number was said to be made up of fairly equal numbers of negro and white men and women.

The perishability of the product has induced many of the managers to import workers from other States, this being especially necessary when the crop is at its peak. Of 705 white women scheduled, each of whom represented a family unit, a little less than one-fourth were migrants. These residents of neighboring States in most cases had contracted for work at the beginning of the season, and during the months when the plants were in operation they and their families were housed in the camps adjoining the various canneries. In spite of the many drawbacks for both employer and employees, a force of workers housed on the premises when the crop is abundant may solve the problem of the manager at a time of labor shortage.

Examination of pay rolls constituted an important part of the study, and in order to obtain accurate and uniform material the agents themselves copied on a special form wage data for women employees. The record of earnings for one week in September, 1924, was obtained for 844 white and 252 negro women, the week selected varying somewhat in the different plants. Not only were the women's earnings for a specified week copied but the rate was noted when obtainable, as was the time worked—recorded sometimes in hours and sometimes in days—for women in each of the occupational groups. The information thus secured has been used as the basis for the discussion of earnings, and the tabulations show the varying length of the working week and the fluctuations in the wage of the workers during a representative week.

⁵ National Canners' Association. Tomato statistics, corn statistics, and pea statistics, 1924.

⁶ Delaware Labor Commission. Manufacturing establishments of Delaware, Jan. 1, 1925, pp. 13-18.

Instead of the method of individual pay records quite generally employed in industrial establishments, some Delaware canneries recorded only the total number of buckets turned in each day by the groups of women engaged in specified occupations. For example, women in the peeling sections of the plants were paid according to the number of buckets of peeled tomatoes turned in, cards ("tickets") distributed by the management being punched as a memorandum of an individual's buckets and no other record of earnings being made. In 12 plants such a figure comprised the only wage data available for women in the peeling section. Quite often it happened that a woman asked for and received her pay several times during the week, and in these circumstances separate items for each of these payments might be considered to clutter the pay roll.

Records of the family and industrial histories of workers were obtained through personal interviews at the various plants. From the section of the Delaware bulletin which presents the personal data of the women covered in the survey, facts regarding the cannery workers have been gleaned and are presented in this report.

The agents of the Women's Bureau also secured data in regard to the arrangements made for housing workers who had come from some other locality to help in the seasonal rush. Fourteen of the 34 vegetable canneries included in the survey provided some sort of housing for migrant workers. These camps were inspected by the agents, who noted especially the equipment and facilities furnished. The number of houses in a camp varied; in several cases there was only one building, but a large plant visited had as many as 24 houses for those who came from a distance to help in the work of the cannery.

TABLE 1.—Week's earnings of cannery employees, by time worked and race

A. WOMEN WHOSE TIME WORKED WAS REPORTED IN HOURS

Week's earnings	Number of women reported		Number of women earning each specified amount who worked—												
			Under 10 hours		10 and under 20 hours		20 and under 30 hours		30 and under 40 hours		40 and under 50 hours	50 and under 60 hours	60 and under 70 hours	70 and under 80 hours	50 hours and over
	White	Negro	White	Negro	White	Negro	White	Negro	White	Negro	White	White	White	White	White
Total	494	24	27	2	23	1	49	7	121	14	91	74	90	19	183
Per cent distribution	100.0	100.0	5.5	8.3	4.7	4.2	9.9	29.2	24.5	58.3	18.4	15.0	18.2	3.8	37.0
Median earnings	\$9.05	\$6.30	\$1.40	(¹)	\$3.20	(¹)	\$4.80	(¹)	\$7.00	(¹)	\$9.50	\$11.85	\$13.15	\$14.75	\$13.15
Under \$1	5		5												
\$1 and under \$2	21	2	21	2											
\$2 and under \$3	11		1		10										
\$3 and under \$4	12	1	1		7	1	5								
\$4 and under \$5	30	1			6		24	1							
\$5 and under \$6	14	6					12	6	2						
\$6 and under \$7	62	7					3		59	7					
\$7 and under \$8	63	7					5		54	7					
\$8 and under \$9	27								3		4				
\$9 and under \$10	38								3		34	1			1
\$10 and under \$11	35										18				17
\$11 and under \$12	28										5	23			23
\$12 and under \$13	51										4	6	41		47
\$13 and under \$14	27										2	3	22		25
\$14 and under \$15	32											19		13	32
\$15 and under \$16	12											1	5	6	12
\$16 and under \$17	20												20		20
\$17 and under \$18	6											5	1		6

¹Not computed, owing to small number involved.

HOURS AND WAGES

TABLE 1.—*Week's earnings of cannery employees, by time worked and race—Continued*

B. WOMEN WHOSE TIME WORKED WAS REPORTED IN DAYS

Week's earnings	Number of women reported		Number of women earning each specified amount who worked on—													
			1 day		2 days		3 days		4 days		5 days		6 days		5 days and over	
	White	Negro	White	Negro	White	Negro	White	Negro	White	Negro	White	Negro	White	Negro	White	Negro
Total.....	303	155	20	10	18	14	28	113	61	4	55	6	121	8	176	14
Per cent distribution.....	100.0	100.0	6.6	6.5	5.9	9.0	9.2	72.9	20.1	2.6	18.2	3.9	39.9	5.2	58.0	9.0
Median earnings.....	\$9.65	\$5.15	\$1.70	(1)	\$4.00	(1)	\$5.50	\$5.25	\$6.45	(1)	\$10.05	(1)	\$15.15	(1)	\$12.65	(1)
Under \$1.....	5	2	5	2												
\$1 and under \$2.....	7	7	7	4		1		2								
\$2 and under \$3.....	7	13	3	3	4	5		5								
\$3 and under \$4.....	16	18	2	1	5	2	5	15	3		1				1	
\$4 and under \$5.....	21	33	2		3	5	7	28	9							1
\$5 and under \$6.....	27	31			6	1	4	28	13	1	4	1			4	1
\$6 and under \$7.....	18	18					2	18	12		3		1		4	
\$7 and under \$8.....	23	10	1				3	9	12	1	5		2		7	
\$8 and under \$9.....	15	4					3	3	4		7		1	1	8	1
\$9 and under \$10.....	19	9					1	4	3	1	7	3	8	1	15	4
\$10 and under \$11.....	23	2					1	1	1		11	1	10		21	1
\$11 and under \$12.....	25	2					1		4	1	4	1	16		20	1
\$12 and under \$13.....	13	1					1				4		8	1	12	1
\$13 and under \$14.....	4	2											4	2	4	2
\$14 and under \$15.....	10										1		9		10	
\$15 and under \$16.....	16	1									4		12	1	16	1
\$16 and under \$17.....	14										1		13		14	
\$17 and under \$18.....	9	2									1		8	2	9	2
\$18 and under \$19.....	5												5		5	
\$19 and under \$20.....	5										1		4		5	
\$20 and under \$21.....	4										1		3		4	
\$21 and under \$22.....	4										1		4		4	
\$22 and under \$23.....	6												6		6	
\$23 and under \$24.....	1												1		1	
\$24 and under \$25.....	2												2		2	
\$25 and under \$26.....	1												1		1	
\$26 and under \$27.....	2												2		2	
\$27 and under \$28.....	1												1		1	

1Not computed, owing to small number involved.

HOURS AND WAGES

Because canning is seasonal work the number of employees and extent of output vary considerably from week to week; in an industry so largely dependent upon the ripening of the crop climatic conditions are apt to cause either a shutdown or an influx in the cannery. Good management—forethought in regard to the amount of goods to be delivered and cared for at the plant at stated intervals—exerts a strong influence on the length of the working day. It has been proved that one of the chief reasons for excessive overtime in a cannery is the fact of the overseer's contracting for more of the crop than can be handled in a scheduled or regular day. Having on hand an excess of perishable goods becomes a temptation to the management to can as much as possible, and in this way long hours and excessive overtime long have been regarded as the lot of the cannery worker. Weather conditions, too, frequently are the cause of a fluctuation in the cannery, so that when several days of rain render picking impossible the accumulative picking of the next few days swamps the plant, and at such times it seems that nothing but long hours or a greatly increased force can save the crop. A number of canners have found the solution to such a problem in the employment of an extra shift of workers at the peak of the season; by thus lessening the fatigue of employees in their plants the more progressive canners are insured greater efficiency on the part of the individual and a larger output for the plant.

Science has proved the fact that long hours of work do not result in increased production—that beyond a certain point the workers' efficiency is impaired and a falling off in production noted. By poisoning the system fatigue so reacts on the physical structure of the individual that lessened productivity becomes the lot of that firm which day after day requires long hours of its workers. The true significance of long and irregular hours becomes apparent further when it is realized that many women, after a day of varying length at the cannery, store, or factory, have multitudinous duties at home. Limitation of the hours of work of women is, therefore, a safety measure, the conservation of their energy being a forward step in the progress of the race. Considering the output of the plant as the main reason for its commercial existence, it would seem that measures tending to insure the greatest production and at the same time conserve the health of employees would be deemed of such vast importance as to be readily adopted.

During the height of the season the thought uppermost in the mind of the canner is to dispatch the goods as quickly as possible. The raw product deteriorates rapidly, and to save the crop requires either an extra corps of workers or longer hours for those already

employed. Too often is the latter method chosen and an additional and unexpected tax put upon the strength of each worker. A woman who does not know whether her workday will be 1 hour or 13 hours long is not disposed to give to her task that attention characteristic of one whose hours of work are regular day after day.

The attempts already referred to, by which a few industrial pioneers made the effort to standardize and shorten the working day of women in canneries, should be regarded as a forward step in the progress of the industry. Recognizing this fact, some managers have speeded up production without at the same time imposing a hazard on any individual worker. Thus is the product saved for both canner and consumer without in the least jeopardizing the health of the employees.

Many of the canneries visited by the agents of the Women's Bureau during this investigation were located in isolated districts, the plant forming the one link of the community with the industrial world. Some of the labor for these plants is imported from large cities, but much of it is recruited from the neighboring farms and for this the few weeks of seasonal work in a canning factory constitute the extent of the worker's industrial history for the year.

It has been said that scheduled hours mean almost nothing in the canneries—there is so much overtime and undertime that any schedule would be warped beyond recognition. According to the report of the American Canners' Association already quoted, 1924 showed a decrease from 1923 of 14.7 per cent in the total number of cans of tomatoes produced in the United States. In that time the output of Delaware fell more than one-third (34 per cent), and while the State ranked third in the number of cans of tomatoes produced in 1923 it dropped to sixth place in 1924. With this condition in mind it does not seem strange, owing to the irregularity of the season of 1924, that the various plants could not specify with any degree of accuracy the scheduled hours of a day or of a week. Since scheduled hours in the canneries are so varied and irregular it is to be expected that the actual working hours of the women employees would fluctuate from day to day and from week to week.

In a discussion of the length of the working day in canneries the statement which follows is of significance, for it shows the development of the industry in California, a State having vast cannery interests:

The hours worked in the canneries have been gradually reduced year by year. Twenty years ago it was considered that an establishment was not operating in a way to bring the utmost returns on the investment unless the plant were running about 20 hours a day. One of the notable things at the present stage of industrial development is the fact that the canneries have learned what other lines of industry have learned—that excessive hours of work are not efficient from the viewpoint of output, to say nothing of the consideration of the welfare of the workers. In past years Sunday work was very common. However, it was found

that the women accomplished less in seven days than in six. For the most part they took time off during the week, so that their hours of work were increased by very little. The total output was not increased, but all the regular operating expenses were increased by one day's work. In the asparagus canneries employing Chinese labor the seven-day week still prevails; but those employing American women operate upon a six-day week. With this exception of the Chinese canneries Sunday work has been eliminated.⁷

Because of the perishability of the product, canning is considered seasonal work. In Delaware this industry is the one exception to the law limiting the hours of work of women to 10 a day and 55 a week. In 17 States and the District of Columbia, however, the laws make no distinction between canning and any other form of manufacturing, limiting the number of hours per day or per week that a factory may operate. Six States—Arkansas, California, Kansas, New York, Oregon, and Wisconsin—that have exempted canning from the general law covering manufacturing, as Delaware has done, have placed such restrictions on women's overtime in seasonal work that each of these States may be said to regulate the hours of work of the women in canneries. If restrictions regarding overtime are applicable to seasonal work in some States, it would seem that the old theory of the necessity of long or irregular hours is exploded and the way made clear for similar legislation in other States where canneries are found.

In all but 3 of the 34 canneries inspected in Delaware, both daily and weekly schedules were reported as "irregular" or "unusual," and although approximately one-third of the 31 did give some particular number of hours, in each instance the number was qualified by the term "irregular" or "not usual." Such indefinite information is not suited to statistical analysis, so scheduled hours of cannery workers do not appear in this report.

Cannery material collected by the agents of the bureau discloses the fact that two systems of recording pay-roll data were in use in Delaware at the time of the survey. Because of the difference in the type of information secured, tabulations of these records have been made in two ways: First, according to the week's actual earnings, and second, by ascertaining the average earnings per woman for the week. No attempt has been made to combine the data on earnings of women for whom individual entry was shown with those of women in plants where pay rolls recorded the day's work in totals only.

The system first named permits the same standardized tables of earnings, correlated with days and hours worked, as are shown in other statistical reports of the Women's Bureau. The detailed information presented on pay rolls of the various firms was copied for every

⁷ California Industrial Welfare Commission. Report on the regulation of wages, hours, and working conditions of women and minors in the fruit and vegetable canning industry of California. May, 1917. p. 116. (Bulletin 1.)

woman whose name appeared on the books and from such data statistical tables for the period were compiled.

The second system, in which a record of the day's work was kept in totals only, was found in 12 canneries. Figures showing the total number of employees working part or all of each day specified and the total number of buckets of tomatoes, for example, peeled each day, comprise the extent of the pay-roll data available. In most of the canneries the number of hours the plant had been in operation each day of the period also was reported. From this material the week's average earnings per woman and computations of hourly and daily averages have been made for each of the plants included.

Regarding the former group, unpublished data including women for whom time worked was not reported show that regardless of time worked the range of actual earnings extended from less than \$1 received by 12 women to the \$28 earned by 1, the latter amount being the highest reported in any current pay roll of this industry. Even a cursory examination of the records reveals a great bulking of numbers in the lower wage groups, almost one-third (31.3 per cent) of the white women and approximately three-fourths (72.2 per cent) of the negro women earning less than \$7 during the week reported. When it is remembered that in California \$16 is the minimum wage required by law for women in canneries, the fact that only 8.3 per cent of the women for whom wage data were secured in the canneries of Delaware received as much as this places additional stress on the very low earnings of the women scheduled.

In all, 24 firms furnished individual pay-roll data for 1,096 women, 844 of whom were white and 252 negro. Regardless of time worked, median earnings of white women were \$9.40, while negro women had a median of only \$5.55. The latter figure is closely tied up with the short time these women worked, 35½ being the longest weekly hour period reported for them. The 24 negro women in section A of Table 1 on page 5 were employed by one firm; all had a 20-cent rate of pay and all designated tomato peeling as their occupation. It is significant of the short time prevailing in the canneries of Delaware to find that this particular firm, which reported a maximum of 35½ hours for negro women, showed only one of its white women to have exceeded these hours.

To present a true picture of the situation, a correlation of earnings with time worked is necessary. How many hours or days did it take the worker to acquire such earnings? What factories were responsible for variations, not only in the earnings of the individual from week to week but in the earnings of the group? Of all the women reported, almost one-half (47.3 per cent) had time worked recorded in hours, over two-fifths (41.8 per cent) had days worked reported, and 10.9 per cent gave such an indefinite report that it

was not possible to use the data in a correlation of earnings and time worked.

Table 1 presents week's earnings of the women in canneries by the time worked. Section A includes the women whose hours worked were reported, and section B those whose records were kept in days.

In the first section of this table approximately one-fifth (21 per cent) of the women reported had a week of 60 hours and over, unpublished data revealing that all but one woman in this group worked more than 60 hours. Almost one-third (31.5 per cent) of the women for whom hours worked were reported exceeded 55 hours—the maximum set by the State for other industries.

In spite of these per cents in the higher hour groups, the greatest proportion of women in any one classification is that of 30 and under 40 hours, over one-fourth (26.1 per cent) of the women appearing in this one column. The short time general throughout the industry in 1924 is emphasized in both sections of this table; as many as 45.8 per cent of the women for whom time worked was reported are found to have worked less than 40 hours or on less than 4 days. This heavy bulking in groups employed only part time involves approximately one-half of the women for whom time worked was reported during a week considered sufficiently representative to be selected by the managements.

Since no scheduled time, either daily or weekly, was available for the canneries and there is no standard of hours in the industry, an exact statistical presentation of the number of work hours to a day is not practicable. However, for the especial purpose of presenting in more tangible form the tremendous amount of part-time work during the week scheduled, days may be reckoned in terms of 10 hours each. Applying this formula to the records, it is evident that little beyond a half week's work was the lot of the women in the four-day classification of the table and of the women working 30 and under 40 hours in the week considered as representative of the industry. Not far from two-fifths of all the women for whom time worked was reported had employment for only about half the week.

The 30-and-under-40-hour classification includes 24.5 per cent of the white and 58.3 per cent of the negro women whose hours were reported, but the total number of the negro women in section A of this table is very small, there being a ratio of about 1 negro to 20 white women. About one-fourth the white women having hours worked reported received actual earnings of \$6 and under \$8, the median earnings of the whole group being \$9.05. For the negro women median earnings have been computed as \$6.30.

While actual earnings of the women in the first section of the table range from less than \$1 to the \$17-and-under-\$18 group, the days-worked section includes one woman who received as much as \$27.40 for the week. Of the women for whom hours were reported the six

in the highest wage classification, \$17 and under \$18, were employed by one firm as general packers and had such hours of work as $58\frac{3}{4}$, $59\frac{1}{4}$, and $60\frac{1}{2}$.

That an undertime week was prevalent in the industry in Delaware is further emphasized by the table of days worked, where the greatest proportion of women in any one group appears in the three-day column. The vast majority of the women in this classification (80.1 per cent) were negroes, and it is evident that almost three-fourths (72.9 per cent) of the negro women for whom days worked were reported had been employed on not more than three days. On the other hand, practically two-fifths (39.9 per cent) of the white women in the table appear in the group representative of a week of six days.

For the white women whose records show work on six days median earnings are found to be \$15.15, an amount higher by \$2 than the median earnings of those whose records show as much as 50 hours of work during the week for which the pay roll was taken. Almost 60 per cent of the white women in section B of the table are shown as working on five or six days, median earnings for this number (176) being \$12.65. As already stated, no negro women had hours exceeding $35\frac{1}{2}$ and the 14 whose records showed as much as five days of work constituted only 9 per cent of the number found in the table of days worked, an exceedingly small proportion when contrasted with the 60 per cent quoted for white women who worked on at least five days of the week.

By the 10-hour-day formula already referred to, all women who worked 50 hours or more and those whose records showed employment on 5 or 6 days may be considered as working a full week. In all, they constitute about three-eighths (38.2 per cent) of the women for whom both earnings and time worked were secured. Median earnings for the group having worked as much as 50 hours are \$13.15, and for those working on 5 days or more they are \$12.55; a combination of these two groups reveals median earnings for women working a full week amounting to \$12.95.

As already stated, the highest-paid worker for whom a record of time worked was reported was a peeler who received \$27.40 for a six-day week, and the actual earnings recorded for peelers in general are very much higher than the amounts shown for packers. While the six highest paid packers received \$17 and \$18 for a week of more than 58 hours, there were 27 peelers whose earnings amounted to more than this during the six-day week recorded.

Arranged according to the number of hours or the number of days worked, the following table, compiled from the more detailed figures in Table 1 already presented, shows the number, the per cent, and the median earnings of white and negro women for whom individual pay-roll records were secured.

TABLE 2.—Median earnings of cannery employees, by time worked and race

WHITE WOMEN WHOSE TIME WORKED WAS REPORTED IN HOURS				WHITE WOMEN WHOSE TIME WORKED WAS REPORTED IN DAYS			
Hours worked	Number of women reported	Per cent distribution	Median earnings	Days on which work was done	Number of women reported	Per cent distribution	Median earnings
Total	494	100.0	\$9.05	Total	303	100.0	\$9.65
Under 10.....	27	5.5	1.40	1.....	20	6.6	1.70
10 and under 20.....	23	4.7	3.20	2.....	18	5.9	4.00
20 and under 30.....	49	9.9	4.80	3.....	23	9.2	5.50
30 and under 40.....	121	24.5	7.00	4.....	61	20.1	6.45
40 and under 50.....	91	18.4	9.50	5.....	55	18.2	10.05
50 and under 60.....	74	15.0	11.85	6.....	121	39.9	15.15
60 and under 70.....	90	18.2	13.15				
70 and under 80.....	19	3.8	14.75				
NEGRO WOMEN WHOSE TIME WORKED WAS REPORTED IN HOURS				NEGRO WOMEN WHOSE TIME WORKED WAS REPORTED IN DAYS			
Total	24	100.0	\$6.30	Total	155	100.0	\$5.15
Under 10.....	2	8.3	(1)	1.....	10	6.5	(1)
10 and under 20.....	1	4.2	(1)	2.....	14	9.0	(1)
20 and under 30.....	7	29.2	(1)	3.....	113	72.9	5.25
30 and under 40.....	14	58.3	(1)	4.....	4	2.6	(1)
				5.....	6	3.9	(1)
				6.....	8	5.2	(1)

¹ Not computed, owing to small number involved.

Although for the white women the median of the earnings with record of days worked is higher than the median for the group with hours worked reported, for the negro women the opposite is true.

The table shows that for both hours and days worked the median earnings of white women increased with each successive group. Although earnings were higher for women working on 6 days than for those having a corresponding period in hours, the fact must be remembered that work "on 6 days" may involve an excessive number of hours, since for women in the day group no hours were recorded. Dependent on the flow of work on each of the days, a 6-day week in the canneries of Delaware may mean many hours or few. On the books of many plants an entry of a day's work indicates only that a woman worked on that day, but whether it was for a short time, for full time, or for much overtime, was not made a matter of record by the cannery.

Because of the small number of negro women involved it was possible to compute median earnings only for the 3-day classification, which includes almost three-fourths of the negro women in the second section of the table. For these 113 women the median was \$5.25.

Earnings of timeworkers and pieceworkers.

Just as two systems of payment prevail in many other industries, the canneries show a representative number of timeworkers and of piece-

workers—516 and 566, respectively. An analysis of the occupations of the women in relation to their basis of pay becomes of especial significance since the numbers included in these two groups are so nearly alike.

TABLE 3.—Extent of timework and piecework in canneries, by product, race, and (for tomatoes) occupation

Product and occupation	Number of women reported		Number of women employed on—				
			Timework		Piecework		Both timework and piecework; white
	White	Negro	White	Negro	White	Negro	
Total.....	842	252	492	24	338	228	12
Beans.....	66	52	66			52	
Corn.....	52		52				
Tomatoes—							
Peeling.....	401	200	63	24	338	176	
Sorting.....	20		20				
Packing.....	108		108				
Filling ¹	34		34				
Can left.....	2		2				
Two or more jobs.....	159		147				12

¹ The same as "packing" in some establishments.

Unpublished data reveal that the women paid on a piece-rate basis all were employed in 10 of the plants; 9 plants paid in this way only the tomato peelers, and 1 had negro bean sorters thus classified. Tomato peeling generally is regarded as a piecework job, so it is not surprising that almost six-sevenths (85.5 per cent) of the women in this occupational group were paid by the number of buckets. Numerically first of the occupations listed in Table 3, peeling includes almost two-thirds (64.3 per cent) of the women having a particular kind of work specified on the books of the plants. Median earnings are found to be \$7 for all peelers, timeworkers and pieceworkers. For women whose pay is based on the number of buckets, \$7.15 is the median computed. In only one plant were peelers given an hourly rate, the 87 women in this cannery appearing as time workers.

Section A in Table 1 gives all facts regarding the earnings and hours of timeworkers, since the women for whom hours worked are shown are the same as those whose pay was reported on a time basis. Moreover, a tabulation of the earnings of pieceworkers includes almost all the women appearing in the correlation of earnings and days worked. In only one column—that of 6 days—does the total represent a different group of women. For eight women no definite basis of pay was recorded on the books of the plants, although a record of their earnings and the days they worked did appear. The eight additional women are found in the 6-day group of the second part of the table and affect the median of the total number to a slight

extent, for the median of the pieceworkers is \$9.45, or 20 cents less than that of the women with a record of days worked.

Earnings by occupation.

Preparation—that is, sorting and peeling tomatoes, sorting beans, and trimming corn—engaged more than five-sixths of all women for whom jobs definitely were reported, a ratio of 5 preparers to 1 canner. The 159 women having more than one job are not included in this proportion. Packing, which is considered a canning rather than a preparing job, often includes men as well as women, while men are rarely, if ever, employed as preparers.

The median earnings of preparers working 50 hours or more, again arbitrarily considered as the length of a full week, are found to be \$14.30; those of canners, \$16.10. The number and per cent of these women, arranged in three different hour classifications, together with the median earnings of groups which might be considered as under-time, full-time, or overtime workers have been summarized as follows:

Hours worked	Preparation			Canning		
	Women reporting		Median earnings	Women reporting		Median earnings
	Number	Per cent		Number	Per cent	
Total.....	225	100. 0	\$7. 55	144	100. 0	\$8. 33
Under 50 hours.....	192	85. 3	7. 25	96	66. 7	6. 30
50 and under 65 hours.....	33	14. 7	14. 30	21	14. 6	13. 50
65 hours and over.....				27	18. 8	16. 35
50 hours and over.....	33	14. 7	14. 30	48	33. 3	16. 10

The great majority of workers are shown in the lowest hour grouping, as many as six-sevenths of the preparers and two-thirds of the canners being found in this classification. Although no preparation job was continued for as long as 65 hours, almost one-fifth of the canners show a week at least as long as this.

No woman worked a week of exactly 50 hours and the median earnings of preparers who worked between 50 and 65 hours are \$14.30, an amount approaching the \$15.15 for peelers doing piecework six days of the week. In comparing the median earnings of these two groups it must be remembered that the 10-hour day on which full time has been based is hypothetical, for, as already remarked, the great majority of the canneries gave no definite information of their scheduled hours.

According to an unpublished tabulation, bean sorting and tomato peeling had no woman who had worked as long as 50 hours, but both trimming corn and packing tomatoes showed a number who had put

in as much time as this, the median earnings for these two groups amounting to \$14.65 for trimmers and \$16.25 for packers, amounts not unlike the medians quoted for all preparers and all packers (\$14.30 and \$16.10, respectively) whose week was at least 50 hours long.

Regardless of time worked, median earnings of white women paid on the basis of output were \$9.90 and those of negroes \$5.50, while the medians for timeworkers, white and negro, were respectively \$9.05 and \$6.30.

Hourly rates.

The records of timeworkers included various occupations in the canning of tomatoes, corn, or beans, and as different plants paid different rates, even for the same kind of work, an analysis of the hourly rates according to the job classification of the women is of interest.

TABLE 4.—Hourly rates of timeworkers in canneries, by product and (for tomatoes) occupation

Product and occupation	Number of women reported		Number of women whose hourly rate was—						
			17½ cents	20 cents		Over 20 and under 25 cents	25 cents	Over 25 and under 30 cents	30 cents
	White	Negro		White	Negro				
Total.....	492	24	38	330	24	11	104	2	7
Per cent distribution.....	100.0	100.0	7.7	67.1	100.0	2.2	21.1	0.4	1.4
Beans.....	66			65			1		
Corn.....	52						50	2	
Tomatoes—									
Peeling.....	63	24		60	24		3		
Sorting.....	20			9			11		
Packing.....	103		2	51		11	37		7
Filling ¹	34			32			2		
Can loft.....	2			2					
Two or more jobs.....	147		36	111					

¹The same as "packing" in some establishments.

Of the 516 timeworkers for whom occupation and hourly rate were specified, 43.6 per cent were engaged in preparing and 27.9 per cent in canning, while 28.5 per cent had more than one job during the pay-roll period reported. The 118 women in the corn and bean canneries are classed as preparers, since the women scheduled in these firms, though engaged on two or more operations, were confined to preparation jobs. Due to the fact of some large plants recording two or more occupations for many of their women, this proportion in the tomato industry is abnormally high.

Four-fifths of the women whose records were secured were engaged on tomatoes at the time of the survey, and as far as the number employed is concerned the most important of the jobs specified is packing. Peeling, on which were employed all the negro timeworkers in the industry, is second of the tomato occupations listed.

More than two-thirds of the women received an hourly rate of 20 cents; about one-fifth, approximately one-half of whom were trimming corn, got 25 cents an hour. With the exception of those paid 17½ cents, the number of women in each of the other classifications is insignificant. The seven women for whom a 30-cent rate was reported were employed by one firm as general packers.

Earnings in plants with incomplete records.

As cannery work in Delaware is carried on in quite isolated places, modern methods of bookkeeping and cost accounting as yet have not been adopted throughout the industry. How much this lack of system affects the standards of hours and wages it is difficult to say, but the poorly kept records of seasonal industries probably exert a depressing influence on the industry's hours and wages. Apparently canneries as yet have not recognized the value of the complete records kept by other industries over a period of three to five years; an analysis and comparison of these figures bring to light unsuspected leaks, the discovery of which leads to adoption of measures of improvement and progress.

On the books of 12 canneries there was no individual record of the work done by peelers. Total output being their chief concern, these plants—many of them temporary structures—kept account each day of the total number of buckets of peeled tomatoes turned in and the number of employees working. They knew also the number of days and hours the plant was in operation. In these canneries tickets were distributed, and a number was punched in the column designated for each basket of tomatoes a peeler received and for each bucket of peeled tomatoes she turned in. As the peeling is mostly a piece-work job, the output of the individual depends to a great extent upon the speed and regularity of the worker, for while one woman might complete a ticket in a day or two another more spasmodic and irregular in attendance and work might be several days making a similar record. The 12 canneries using this lump-sum method kept no account of an individual's pay; earnings were figured and payment was made according to the number of buckets punched on each peeler's card or cards for the given period, the only items shown on the books being the sum totals for each day the cannery was in operation. Since these were the only data available in the records copied by the agents of the bureau, computations have been made which show, for the peelers in each plant, the average number of women employed and of buckets peeled, the average hourly and daily earnings, and the average earnings for the week. Although not so valuable as the individual earnings copied from the pay rolls, these averages for peelers are of interest and importance; and as practically all the women included were engaged on tomato peeling, a discussion of

their average earnings seems significant. Records of tomato peelers only are found in Table 5. In the one plant which reported work alternately on corn and tomatoes, entries regarding the number of women workers and the number of crates and baskets of corn were so definite that it was not a difficult matter to pick out the items having reference to tomato peeling.

TABLE 5.—Hours and earnings of tomato peelers, by cannery—plants with incomplete records¹

Cannery	Average number of peelers	Average number of—		Average week's earnings	Average daily earnings	Average hourly earnings	Piece rate	Maximum number employed	Minimum number employed
		Days cannery was in operation	Hours cannery was in operation						
Number 1.....	57	5	45½	\$6.43	\$1.29	\$0.14	\$0.07	62	51
Number 2.....	50	5	38½	8.64	1.73	.24	.06	65	25
Number 3.....	50	3	19¾	4.16	1.39	.21	.07	(²)	(²)
Number 4.....	29	5	45	10.42	2.08	.23	.06	31	25
Number 5.....	78	6	46½	6.16	1.03	.13	.07	85	65
Number 6.....	42	2½	21½	5.19	2.08	.24	.08	45	35
Number 7.....	30	6	60	13.79	2.30	.23	.08	40	20
Number 8.....	60	6	(²)	8.85	1.47	(²)	.06	(²)	(²)
Number 9.....	32	5	35	8.78	1.76	.25	.05	35	18
Number 10.....	70	6	40	14.04	2.34	.35	.08	85	60
Number 11.....	60	5	44½	4.50	.90	.10	.08	60	60
Number 12.....	60	6	52	10.17	1.70	.20	.08	60	60

¹ In these canneries records of individual employees were not kept, but their total number, total output, and rate, and the days and hours cannery was in operation, were obtainable.

² Not reported.

In 9 of the 12 canneries listed in the foregoing table individual pay records were available for women engaged on other than peeling jobs, so it seems evident that in three-fourths of these plants records were kept in two ways—sum totals only for the peelers and individual records for all other jobs. These 9 plants have been included in the 24 canneries furnishing individual records as well as in the 12 plants for which only totals of each working day were secured. From material in this latter form the average number of peelers and their average earnings per hour and per day, as well as the week's average earnings, have been found. Such data could not, of course, be coordinated with individual pay-roll records, as two kinds of earnings—average and actual—are involved.

Five of the 12 establishments reported operated on 6 days of the week, the average week's earnings per woman ranging from \$6.16 in one plant to \$14.04 in another. In explanation of the high earnings prevailing in the latter, a note on the schedule taken for this cannery is quoted here: "Children were said to help by peeling into their mothers' buckets." An increase in the output of the plant without a corresponding increase in the number of employees would raise the average earnings of this one firm. However, though operating a 40-

hour week, $6\frac{1}{2}$ hours less than the weekly operation of the plant which showed the lowest average wage (\$6.16), this cannery has average earnings more than twice the amount computed for the plant with an operating period one-sixth longer. It does not seem possible that such an increase in average earnings could be attributed to the help of children, and the higher average of the peelers probably is due to other conditions.

As a great number of the plants canning tomatoes had no other wage data available for tomato peelers, the preceding table is of twofold interest; it presents not only average earnings of a selected occupation in which many women are engaged but the fluctuations occurring in the average hourly, daily, and week's earnings in that occupation for the women in 12 plants.

WORKING CONDITIONS

Location and buildings.

Tomato canning is a highly competitive business. In the United States there are more canners of tomatoes than of any other single article of canned food. The large number of canneries is due to the fact that the processes are simple, comparatively little machinery being essential, and the character of women's work is similar to domestic food preparation, so that training and skill on the part of the worker are not required. Since the season comes during mild weather, it is not necessary to build expensive and substantial structures to house machinery and workers.

A favorite location for canneries is on the bank of a creek or river; such streams facilitate the disposal of waste matter and are sometimes used for transporting tomatoes to the cannery. In towns lacking such natural advantages the canneries usually are found near the railroad stations. Occasionally one finds canneries inland, away from towns and railroads, hidden in the fields or a farmer's back yard. Such plants are hardly more than neighborhood affairs, to which whole families, including the babies and watch dogs, report when the canneries operate. Almost nothing is done to make the yard or surroundings attractive; often the cannery yard is cluttered with piles of broken boxes, wood, and coal, and further disfigured by stagnant puddles of water due to overflowing gutters and leaking drains.

Many canneries are little more than open-air pavilions. In cases of stormy or inclement weather, such buildings are not comfortable working places. Where apples, pumpkins, and sweet potatoes are canned after the tomato season, the women must feel the cold and dampness greatly. Light and air are admitted by raising flap sides of the walls, and for protection against the weather a few places provide canvas curtains. Sash windows and screens rarely are

furnished. Two of the best canneries visited had metal awnings over the wall openings, which kept out excessive sunlight and rain.

Two canneries were quite dilapidated. In one, the floor of the can loft and storeroom had collapsed during the season and the whole place indicated a state of unchecked depreciation and deterioration. Another, which had operated intermittently in the last few seasons, with its sides caving inward, seemed ready to fall at the first strong blast of wind. However, these were exceptional cases, and most of the canneries were in a good state of repair and represented all that could be expected of such buildings.

None but the larger canneries have more than a single story. In only five firms were women reported to be working above the ground floor and their number was small. However, in four of the five cases the stairways leading to the second floor were bad. In two the stairways were little more than ladders, and in the others there were no handrails or protection against a headlong fall if a worker should slip. In several places unguarded floor openings on the second floor offered a possible accident hazard. The workers, usually young girls, who were employed on the second floor, were "can chuters," whose duty was to keep a steady flow of cans sliding down a chute to the filling machines and tables. Frequently young boys, in some places very young boys, were employed for this operation. Where the floor of the can loft was poor, the steam from the workroom below oozed through the cracks, and with the small windows and low sloping roofs characteristic of these places, on hot days the heat and humidity must have caused the workers great discomfort.

Processing of canned tomatoes.

A brief description of the processes involved in converting fresh tomatoes into the tinned product may serve to give an idea of the work of women in canneries. When sufficient fruit has been received in the yard to warrant a run of tomatoes, the preliminary washing begins. This work is usually done by men. The common procedure is to dump the fruit into a tank filled with water, from which it is carried on a conveyor belt beneath a spray to wash away sand and clay clinging to the skins.

Ordinarily the next step is sorting, removing the imperfect tomatoes and cutting away the defective parts. Where the tomatoes are used only for the familiar canned product, the peelings being thrown away, sorting sometimes is considered an unnecessary expense and is not required, the idea being that the peeler will throw away the imperfect tomatoes with the skin and waste. Faulty sorting often is the cause of a high bacteria count and a putrid product. Where any of the pulp products, such as catsup, puree, or paste, are made either directly

from the tomatoes or from the parings and cores, careful sorting is essential. Sorting is done by women, either at tables or along the sides of slowly moving belts. As a careless sorter can do much harm, this work usually is given to the dependable and careful workers. It is customary to use as sorters old employees who have proven energetic and regular at their work.

After being sorted the tomatoes are sent through the scalding or steamer, where hot sprays of water or jets of steam loosen the skins for peeling. Peelers, almost entirely women, are the largest group of workers within the cannery. Most of the peeling is done by hand, the few peeling machines that are on the market not being generally accepted by even the larger firms. Canneries who have not put in machine peelers say that some of the machines are liable to destroy the shape of the fruit and others affect the natural flavor of the tomato where caustic solutions are used to loosen the skins. Two canneries visited were using a combination of hand and machine peeling; machines having rapidly revolving brushes and using a caustic solution freed the skins, and the women were supposed only to have to pluck out the stem end to which the skin of the entire tomato clung. However, due to a poor grade of tomatoes, the women in one place were constantly using knives to cut out bad and green parts of the fruit. Machine peeling has not yet supplanted hand peeling to any extent, and the number of women employed at peeling is greater than the number employed at any other operation.

Filling the cans is the next step and is usually a machine process. Hand filling is said to preserve the shape of the fruit; it is used in the larger canneries when a fancy pack is desired and in some of the smaller canneries which have not extensive mechanical equipment. Hand filling is women's work, but the filling machines are tended by men. Women inspectors frequently are employed to see that the cans are full and in good condition as they come from the machine. Before the cans are sealed they must be heated to exhaust any pockets of air in the contents, so as to produce a vacuum after the cans are closed. This is done usually by passing the cans on a conveyor through a steam chamber. Capping machines to put on the covers are rather general in the canneries. After the cans are sealed, they are placed generally in racks or specially designed iron baskets and lowered into kettles of boiling water, where they are cooked for the required time. In four canneries visited a newer method of cooking was used in which the cans are rotated slowly in a spiral course through an inclosed steam chamber, the process ending in a cooler. The latter method shortens the time by half and also confines the steam within the cooker, which is especially desirable if the cooking must be done in the general workroom. If only pulp products are manufactured, the work of the women is confined

to that of sorting tomatoes, preparing onions and other seasonings, and capping and labeling bottles and cans. The labeling of cans and bottles usually is done by women, sometimes during the canning season proper but more often after the season's work is completed.⁸

General workroom conditions.

Conditions in canneries varied greatly with the size, resources, and progressiveness of the organization and management. Most of the canners are on the alert to install equipment and to introduce methods which will improve the quality of their product and the sanitation of their plants. In many places the arrangements, methods, and cleanliness were all that the most fastidious could ask for, but in others chaos and messiness were the outstanding characteristics.

Worktables.—Height, width, arrangement, and type of tomato-peeling tables varied considerably from one cannery to another. The most common worktable arrangement was the "merry-go-round." More than one-half of the canneries had this type, in which a conveyor of wood, metal, or rubber runs continuously in a circular course carrying a never-ceasing parade of buckets of steaming tomatoes to be peeled, buckets of peeled tomatoes, and wide dishpans of trimmings and waste. Various arrangements for holding the buckets and pans for the peelers are built on both sides of the central conveyor. In some canneries there are metal rings into which fit the buckets and pans; in others these are accommodated on a series of individual shelves at different heights; but the best arrangement seems to be a continuous shelf-like table with the outside edge raised to keep the waste from dripping on the worker. The abundant juice and squashiness of tomatoes makes peeling wet work at the best and where there are rings or a series of shelves to hold the receptacles, many of the peelers become soaked in juice and the accumulation of waste and drippings on the floor is much greater than where the workers are protected from the drainage by having a solid table.

For those who work on the inside of the "merry-go-round" to reach their places, it is necessary to build bridgelike stairs or stiles over the moving conveyor. Often these stiles presented a real accident hazard. Four stiles were reported as exceedingly bad; their construction was so crude and unstable that they shook from side to side as one crossed; treads were broken or missing and there were no handrails. Even where the construction of the stile is good,

⁸ Because of the few corn canneries visited, their processing and conditions are not discussed. Ordinarily the canning of corn is largely mechanical. Husking is done by machines, and the ears are inspected and the bad parts cut out by women. In two canneries the kernel was cut from the cob by hand. After cutting, the kernels are freed from silk and pieces of cob and packed in cans with salt, sugar, and water; after this they are heated, sealed, and cooked. One corn cannery was immaculately clean. The walls and tables gleamed with white enamel. The workers all had caps and aprons and even the manager wore a white washable suit.

treads wet and slippery with peelings are possible accident traps. Stiles of strong construction, railed on both sides, with ample clearance space at the top so that the person crossing can stand erect, and kept clean and in good repair, are not costly nor difficult to provide when the canner has an interest in the welfare of his workers.

In seven of the canneries visited, boxlike tables, occasionally separated into cribs or compartments for each worker, were arranged in parallel rows across the room. Four to six women worked at each table, and helpers, men or boys, waited on them, bringing buckets of unpeeled tomatoes from the scalding and carrying the buckets of peeled fruit to the fillers. Trimmings and waste were allowed to accumulate on the table, and when the mass got too deep and messy, the women stopped and pushed it to the back of the table or to one end. This opened into a gutter, from which the waste was removed to the outside by being pushed and shoveled into containers by helpers or carried off by a mechanical conveyor. Where the waste was pushed down to the end of the table, the end positions were especially undesirable, because the women there had constantly to stop to move along the wet and slippery mess piling up at their places.

A somewhat similar type of table found in the survey was termed a "table-chute." Helpers were used in the same way, but the tables were longer and the method of waste disposal decidedly better. The table was built like a hopper, with its front and back extending to the floor. Before each worker and at a convenient distance was an opening in the top of the table into which the peelings were dropped. The waste slid to a gutter in the floor, from which it was removed by a mechanical conveyor or by being pushed to the outside by shovels made to fit the gutter. One of the best canneries in all respects had a table of this type. The floors usually were drier and the women less spattered with juice where the "box" table or the "table-chute" was used, but in both the disadvantage was the dependency of the women on the cooperation and efficiency of the helpers to supply them with tomatoes and pans. One instance especially was noted where the inefficiency of the helpers created a state of confusion.

Enamel or granite-ware buckets and dishpans were the receptacles used by the peelers. Where the merry-go-round form of table was used, much confusion and dissatisfaction was avoided by having the buckets and pans numbered so that each worker had her own set. Two canneries eliminated the use of receptacles by feeding the fruit to the workers directly on a slowly moving rubber belt and by carrying off the waste and peeled tomatoes in the same way on other belts.

Elevated work positions.—Women employed at the sorting tables, feeding the pulp machines, or at the filling tables often were compelled

to stand on platforms elevated some distance from the floor. The bad factors of such working places were their insubstantial, loose construction and, in places where the ceilings were low, the steam that enveloped the women. In the 12 canneries having these platforms, one-half were reported as poorly built. In many cases the platform was only a plank supported on boxes or blocks of wood, and in some the platform was exceedingly narrow. In 8 canneries the platforms were so high above the floor that steps were needed to reach them, but nothing more than a movable and insecure box was provided. If it is necessary to have these elevated work positions, they should at least be made safe and comfortable places on which to work.

Seating.—In the canneries seating is a haphazard arrangement at the best, and little attention has been given to its needs or possibilities. Managers attempted to justify the absence of seats on the grounds that canning is seasonal and irregular work and it is unnecessary to provide comforts and safeguards for the employee's health for so short a time. Occasionally the management discouraged the use of seats on the theory that workers are less efficient when seated.

Constant standing for 10 to 12 hours in the busy canning season is deplorable from the standpoint of the individual and undoubtedly reduces the possible output of the worker. Twenty canneries covered by this study had peeling tables of a height convenient only for standing at work, and of these not one provided enough boxes or stools for the workers to be able to sit occasionally. Of the rest of the canneries, which had tables of sitting height, only six were adequately supplied with stools and two had boxes sufficient for all to sit at work. To stand at a low table, bending over work, is extremely fatiguing. Instances were reported where the tables were so low—and no seats supplied—that the women preferred not to use the planks provided to keep them off the wet floor because of the extra stooping required. If the free use of empty packing boxes was allowed, some canners seemed to feel that the seating needs of their plants had been met. Many of the peelers brought their boxes from the packing or storage shed.

Interfering braces, returning belts, and sometimes the long reach necessary to lift pans and buckets from the conveyor, all affect the feasibility of the peelers' sitting at work. Most of these hindrances can be removed easily; the position of braces and shelves can be changed and belts can be raised or lowered so as to obtain the proper clearance space. The ideal arrangement is that at which the employee is in a comfortable working position when standing and has a stool of the right height always available, so that work may be performed either standing or sitting. The ideals of cannery seating have been summarized in a California report in the following.

A seat for cannery use should be comfortable for all users, produce a hygienic position, and not interfere in any way with the motions necessary on the part of the worker. It should further be adjustable, at least vertically; it should be durable, easily cleaned and not cumbersome, admitting, if possible, of construction at the cannery, or, at any rate, of moderate expense.

There is no question that a free choice of position on the part of the worker and the shortening of the motions required on her part will reduce fatigue, and hence increase output. The whole problem is just as much one of efficiency as of hygiene and any improvement would obviously be to the benefit of both employer and employee.⁹

Strain.—Long hours of continuous standing are the most apparent fatigue-producing factor in canneries, but there are other forms of strain which can not be ignored. Excessive noise brings on fatigue, and most canneries are exceedingly noisy. The mechanical-conveyor systems are noisy in themselves; empty cans ring as they tumble down to the filling machine, and the bang of the capping machine adds to the din. Working at the merry-go-round, if the conveyor moves rapidly, may strain the eyes of the worker. After 10 hours the eyes and head are weary and a sensation of a moving conveyor persists and recurs for hours after leaving the cannery. An old colored woman made the following comment, unsolicited by the agent: "See dem blue glasses? Well, I wears 'em because if I don't, dem pans goin' roun' and roun' all de time makes me drunk."

In the corn canneries where the kernel is cut from the cob by hand, the women wear a wooden shield on the stomach, against which they hold the cob as they cut. The posture of the women cutting is bad, and the bandaging of wrists and hands is considered as much a preparation for work as are sharp knives. The women complained that their hand and arm muscles were barely hardened to the job by the end of the season.

These strains may be of minor significance, but altogether they tend to belie the common idea that canning is entirely easy and wholesome work and therefore requires no regulation of working conditions.

Uniforms.—The Delaware law dealing with uniforms in canneries reads as follows: "Female employees who work where foods are being prepared for canning shall wear clean aprons or dresses made of washable fabric and shall also wear clean washable caps over their hair."¹⁰ On the whole, this regulation seemed to be generally observed, and though there were a few uncovered heads the managers seemed to be earnestly trying to enforce the provision by insisting that some sort of headgear should be worn. Colored bandannas, sunbonnets, ribboned boudoir caps, and old hats all were represented. Ordinarily

⁹ California Industrial Welfare Commission. Report on the regulation of wages, hours, and working conditions of women and minors in the fruit and vegetable canning industry of California. May, 1917. pp. 169, 176 (Bulletin 1).

¹⁰ Acts of Delaware, 1915, ch. 223, sec. 5.

the women supplied their own caps, aprons, and knives. In four canneries, caps, aprons, and knives were sold at cost, and in one they were furnished on payment of a deposit, which was refunded at the end of the season if they were returned.

Lighting and ventilation.—The open construction of canneries and the season in which they operate mitigate the problems of lighting and ventilation. Many of the canneries are not even wired for electricity, and most of the work is such that no special intensity of light is required. The disposal of excessive amounts of steam is the chief problem of ventilation. The scalding and cooking processes naturally are accompanied by steam and, unless special arrangements are made to control the escaping steam, the workroom may become both uncomfortable and unhealthful. In an effort to keep out the steam, scalders often were placed entirely or partly outside the peeling room; but even with this arrangement, on cold or rainy days clouds of wet steam hung heavily under the low ceilings and women working at the sorting tables, which usually were near the scalders, were bathed in steam. In one cannery the women had wrapped their heads and necks with towels and scarfs to protect them from the steam. Many canners had made adequate provision for the removal of steam by having the cooker and scalding in a room separate from that in which the peelers worked, and by having openings in the roof which gave the steam a ready means of exit.

Floor drainage.—The canner must pay particular attention to keeping his plant and equipment clean, as mold and the other tiny organisms which render his product unsalable develop rapidly in insanitary surroundings. To clean buckets, machines, tables, and floors there must be an abundance of hot water and live steam. Most of the canneries visited were cleaned twice a day, during the lunch period and at the end of the day, the evening cleaning being the more thorough. In 17 canneries the floors were being hosed constantly or were washed at least twice daily, and in the rest of the canneries visited there was at least one cleaning daily. It is not the general cleanliness of the canneries but the accumulation of water and waste between cleanings that affects the worker. The lack of sufficient gutters and the inadequate pitch of the floor toward the gutters cause puddles of water to remain after the cleaning. A few notes taken from the cannery schedules give an idea of some of the conditions found:

To reach peelers it was necessary to wade through water. A few of the women and most of the men in the cannery wore rubber boots.

Floor was covered with juice and squashy tomatoes. Cookers and cooling tanks were above the level of the peelers on a platform at one end of the room, and the overflow from these tanks drained into the part of the room where the peelers were working. Several hose were lying around with water running from their nozzles.

Juice, skins, whole tomatoes, and puddles of water all around made the floors sloppy.

Can fillers were in such a wet place that ordinary planks were not enough to keep the women's feet out of the water.

By their own carelessness in allowing peelings and refuse to fall the women were partly responsible for the bad conditions of the floors. However, in a goodly number of canneries where the floors were pitched toward a network of gutters that carried off the liquid waste efficiently, and the worktables were such that there was no table drainage to the floor, conditions were remarkably good, especially when contrasted with those in some other places.

Since most of the cannery floors are cement, the women need protection against not only the wetness but the hardness of the floors. Platforms, racks, or raised planks, which should be considered a necessity in all canneries, were found in only about one-third of those visited. In the rest there were heterogeneous planks, box covers, and pieces of mill wood, many of these platform substitutes being brought in by the women themselves. Here is an urgent need for the canners to pay more attention to equipping their plants with platforms to keep the peelers off the wet and hard floor. A platform, to give adequate protection, should raise the worker several inches from the floor and should be of a type which dries quickly and gives a pliant footing, thus adding much to the comfort of the worker.

Waste disposal.—Messy surroundings tend to make careless workers, and canners should not expect the employees to be careful unless they are provided with adequate means of disposing of liquid and solid wastes. Waste disposal is a vital problem for the canner, but it is of little concern to the worker unless the methods are so bad that they interfere with his health or productivity. Liquid waste commonly is drained through tile drains or gutters to streams or ditches near by. Solid waste, the trimmings and cores of the tomatoes, if pulp products are manufactured, are put through a dehydrating process in a machine known as a cyclone. Only the dry skins and seed remain after this process, and some of the canners who do not use the trimmings for a commercial product have a cyclone to facilitate the disposal of waste. Solid waste usually was hauled to adjoining fields to serve as fertilizer. In two places all the waste, liquid and solid, was drained into septic tanks, from which it was pumped and spread on neighboring fields. In all but seven of the canneries the waste-disposal problem seemed to be handled satisfactorily. Accumulated waste in the yard or cannery denoted careless and inefficient management.

Sanitary and service facilities.

Due to the limited capital, the small plants, and the short seasons of many of the canneries, it was not surprising that little was done in

the way of providing service facilities, such as lunch rooms, cloak rooms, and rest rooms. However, there are certain sanitary needs, in the way of drinking, washing, and toilet facilities, which principles of health preservation and common decency dictate as necessities even in canneries.

Drinking facilities.—Many of the canners boasted of their good water supply. The source of the water may have been good generally, but little was done in the way of providing drinking facilities. Drinking facilities usually were one and the same as the arrangement provided for washing buckets and pans; about one-third of the canneries had provision for drinking other than that at the spigot or trough where the peeling receptacles were washed. Several times the agents saw the old-fashioned bucket with a common can passed around by helpers from table to table. Seven plants were equipped with bubblers, but none of the fountains met the sanitary requirement that the jet of water flowing from the orifice should be at an angle of at least 15 degrees from the vertical.¹¹ Individual paper cups were found in only one cannery, but most of the women were able to supply themselves with empty tomato cans for individual drinking cups. In one cannery the pump, which was the only source of drinking water for the workers, had been out of repair for several weeks.

Washing facilities.—Where food products are handled the consumer has an interest in seeing that soap, towels, and washing conveniences are available. The progressiveness of the management in canneries was reflected somewhat by the attention given to the provision of washing facilities. Of the 34 canneries visited, 9 made special provision of bowls for washing. In the others the workers had to wash at the places used for washing pans, which might be a barrel outside the cannery, a pump, a flowing hose at cleaning time, or troughs and tubs with running water. Soap was furnished in 13 canneries, and individual towels were supplied in 15. The washing facilities in one cannery were reported by the agent as follows:

Liquid soap container and towel fixture empty and looked as though not used for a long time. Wash bowls provided, but seemed ready to fall from their brackets any minute. Owner started to show several wash bowls in another part of the room, but then said he guessed they had never been put back after the installation of new machinery.

Running water, individual towels, and plenty of soap should be part of the washing accommodations of every cannery.

Toilets.—The preponderance of outside toilets or privies was amazing. Four canneries had modern flush toilets; the other 30 had outside privies. All but one had facilities separate for men and women and usually separate for negro and white workers. The condition of

¹¹ The National Safety Council recommends 30 degrees as the most satisfactory angle.

the buildings, the numbers using the toilets, and the vaults of many of the privies were far from satisfactory. More than one-third of the buildings were old, unpainted, ramshackle affairs, showing no attempt at maintaining even a fair degree of cleanliness. Vaults were reported as fly-proof in 9 places and in 11 there were evidences of disinfectant having been used. Instead of being built over a vault, six privies were so placed that they were suspended over the banks of a stream or pond, and in some of these places the tide action was insufficient to carry off the fecal matter. A few excerpts from the cannery reports give an idea of some of the conditions met with:

A plank, insecure and slippery, over a ditch led to privy. A worker said she was afraid of plank and also lest the building fall back into the river. Tide action was not enough to clean properly.

Approach to privy was bad; the closet was located on the bank of a pond, and a split log and several planks made a pathway which was steep and slippery with puddles on both sides. The exhaust from the engine room opened near the privy, adding to the danger of the approach and the general disagreeableness. Door hung on one hinge, and the inside of the building was exceedingly dirty.

Privy had no vault. Tin cans placed under seat were not inclosed in any way.

Conditions like those described are intolerable, and there is a real need that regulations be made and enforced with reference to the number, location, construction, and upkeep of cannery toilet facilities.

CANNERY CAMPS

The limited extent of the local labor market makes it necessary for almost one-half of the canners to bring in help from sources outside their home community. To secure a working force of the required number, some of the Delaware canners sent out busses and trucks to transport help from farms and towns near by. A more common practice was to employ a man known as a "row boss" who rounded up whole families to live and work at the cannery. Ordinarily the canners did not resort to the importation of outside help unless it was difficult to secure local workers, because maintaining a camp is expensive and brings a host of problems. However, in years when the tomato crop is abundant and the competition for labor is keen, a force of workers housed in the cannery yard lessens the manager's worries relating to production. Employees housed in a cannery camp are more or less under the thumb of the manager and assure a fairly permanent working force, which is a real asset in a big year.

Of the 34 canneries visited, 14 were providing housing accommodations for all or a part of their workers. The imported cannery help in Delaware were largely Poles from Baltimore; the workers in more than one-half of the camps gave their home residence as Baltimore. One cannery settlement was made up of Italians from Philadelphia. Several camps were peopled by negroes who had been recruited from the eastern peninsula of Maryland and from near Norfolk, Va.

The "row boss" is an intermediary between the canner and the foreign help in his camp; he might be called a cannery padrone. The canner hires the row boss to secure and manage the foreign help. He is always of the same nationality as the workers brought into the camp. Generally he not only represents the management in the hiring of workers but lives in the camp and oversees the work of the foreign help in the cannery. In gathering up his cannery force the row boss usually offers the following inducements: Free rent, free fuel, transportation to the cannery and home again if the workers remain through the entire season, and a summer outing in the country or a small town at which all the members of the family old enough to work can earn good wages. Of the negro employees the same workers tend to migrate to the cannery for years without any official summons.

Buildings.

Some of the camps were all that one could reasonably expect such places to be; the buildings were substantial, well roofed, and generally clean and comfortable. More often, however, the living quarters provided by the canners were bad; the dwellings were the cheapest and poorest that human beings would accept as shelter. The camps ranged from a small shed in which 2 families were living to one of two dozen houses with accommodations for possibly 50 families. Most of the camps were located on the cannery grounds, with the idea of having the workers readily available. Eleven of the camps were within a hundred yards of the cannery proper. With two exceptions, the buildings were summer structures, shanty in type, without foundations. In a number of places the exterior was unpainted, the roofs were leaky, the walls unsealed and unplastered, with wide cracks between the boards; windows were minus both panes and screens, floors were rough, and doors were without latches or locks.

The types of camp buildings varied, but in a general way the quarters provided could be classified as detached houses, remodeled barns and sheds, two-story shacks or tenements, and long rows of low, connected, barrack rooms. In the case of two canneries, small detached houses a block away, plastered and finished as regular dwellings, were maintained as a camp. These were not originally built for such a purpose and were rented to negro tenants during the winter. One of these camps was very good; the other was wretched.

In several places slight remodeling, such as the addition of a rough floor, crude partitions which frequently extended only part way, and holes cut in the walls for windows, had converted sheds and barns into housing facilities. The following excerpts from camp schedules are typical descriptions of this sort.

Two of the units of the camp seem to be old barns. An aisle runs through the center of the building, with doors at each end. Rooms open off both sides, with wooden partition not reaching to the ceiling separating the rooms. On the aisle side there are no partitions, and sheets, pieces of burlap, and old quilts had been hung to secure some privacy.

Six rooms had been partitioned off in an old shed. Wide, rough boards had been put in for flooring, and a small hole had been cut in the outside walls for a window for each room. One corner of the shed served as a common dining room and kitchen; there was no flooring in this part. On the day of the agent's visit it had been raining and water had leaked through the roof so that the ground inside of shed was mostly mud. Several negro families were huddled around an old rusty kitchen stove.

Camps built in recent years usually were long, low, single-story sheds, barracklike in appearance. Each room was a unit intended for a family group. About 12 by 12 feet, though in many cases smaller, was the average size of the rooms. A small window, rarely two, and a door leading to the outside were provided for every room. In the case of this type of building the roof generally had been built to project out over the doorway several feet, and most of the cooking, eating, and community gossip was carried on out of doors under this shelter. The two-story house was considered rather out of date and was unpopular with both employers and employees. There seemed to be an aversion on the part of the workers to living above the ground floor, and instances were noticed where extreme crowding was preferred to the use of upstairs rooms.

Failure to keep the buildings in repair gave several camps a dilapidated appearance. Broken windows and leaky roofs were common; repairs often were left to the makeshift arrangements of the occupants. There was a marked need, for light and for sanitation, of more and larger windows equipped with screens.

The camp buildings were little more than places in which to sleep and to store the possessions which the occupants had brought with them. The floor space was almost filled with beds; the walls were draped with clothing; boxes and bags of food took considerable space. The furnishings generally were meager and consisted of articles which could be made on the place. All but four or five of the camps were equipped with some sort of tables, seats, or benches. In one place there were well-built wooden cupboards, with padlocks, for the storing of food and other belongings. Iron bedsteads and cots were supplied in a few places, but bunks—boxlike containers for straw and bedding, both of the single and double decked variety—were the most common arrangements for beds. In a few places straw spread over the floor on one or more sides of the room, with no pretense of bunks, was reported. While the bad conditions described may not be typical of the cannery camps of Delaware, they represent the camp provisions found in more than one-half the canneries visited.

In many places order and cleanliness, remarkable in view of the time and facilities at their disposal, were maintained by the Polish women workers. The cannery workers of this race are accustomed to modern plumbing and ordinary conveniences in their city homes, and many apologized profusely for the disorder of their shacks, though this would have been hard to avoid. Some of the managers complained bitterly of the class of labor in their camps, and said that it was practically impossible to maintain a decent camp because of the destructiveness and low standards of the campers. However, where the canners provided good camps the occupants seemed for the most part to maintain fairly high standards of cleanliness and order.

Washing and cooking were carried on almost entirely in the yards. In all but one camp the women brought their own laundry tubs. Oil stoves, gas plates, old wood and coal ranges, and outside fireplaces all were represented among the cooking facilities. In one camp individual oil stoves and in another individual gas plates were furnished to the families. Where wood or coal stoves were used they were located in cook sheds and were for the common or community use of all the families living in the camp. The most common cooking facility was a homemade stove of stones or brick, with a piece of corrugated iron for the top. These outside fireplaces were allowed to remain from season to season, each new group repairing the ruins from the previous year. Two or three employers, recognizing the advantages and popularity of these individual fireplaces, had made formal provision for them in long cook sheds with roofs but no walls. A stove having a fire box of cement walls, with pieces of heavy iron sheeting for the top and long flues extending through the roof of the cook shed, was provided for every family. Fuel always was furnished by the employer. Where the help was Polish, the workers usually had built one or more clay and brick ovens for community use in baking bread.

Sanitation.

Nothing about the camps was more generally neglected than were the privies. In every camp insanitary privies—inadequate in number and with buildings and vaults in wretched condition—were much too common. Often the same toilets served for both cannery and camp. At least one-half of the toilets were reported as unfit in some respect for use. In these cases the workers preferred to find a place in the woods or in growths of underbrush rather than use the facilities provided by the employer.

Water supply.—Good water for drinking and cooking purposes, with a plentiful supply for washing and cleaning, is essential to health and comfort. No instance of especially inconvenient or inadequate

water supply was reported. In many cases there were no arrangements for drainage around the pumps or spigots and the overflow formed puddles, these, with the much tramping around the place, causing mud to extend for several feet on all sides.

Premises.

Practically nothing was done to make the yards attractive, and little attention was given to matters of healthfulness and sanitation. The planting of shade trees, a few grass plots, and the graveling of the paths would improve the appearance of the grounds and make the camp settlements more livable. Only six of the camps were provided with receptacles for garbage. In the others there were unsightly piles of refuse and tin cans, or, if there was a growth of trees or a field of weeds and underbrush near by, this served as a dumping ground for all rubbish. Washwater, dishwater, and slops were thrown directly on the ground and in some places had collected in foul-smelling pools. Lacking any arrangements for surface drainage, after a rain the yards became one huge mud puddle. For one camp the "yard" comprised only the few feet of ground directly in front of the doorways, as in the rear a pig pasture extended to the very walls of the dwellings, and in the front a wood and coal pile belonging to the cannery came almost to the doorsteps. A praiseworthy feature reported on two or three camp schedules was the lighting of the grounds at night by electric lights or oil lamps. In one camp, which was good in all respects except its privies, a man was employed to keep the grounds clean and orderly and to watch the camp while the employees were at work in the cannery. Two of the camps visited employed persons to care for the babies and young children while the mothers were at work.

THE WOMEN WORKERS

Questionnaires on the subject of personal information were made out for 736 white women in canneries. Of the negro women, 431 reported their ages and information was secured for these also on the subjects of literacy, time in the trade, and age at beginning work.

Age.

A study of the distribution of working women by age groups serves to refute the tradition that women are merely transitory wage earners for a short period before marriage. In the canneries only 18.9 per cent of the white women were under 20 years of age, 42 per cent were 20 and under 40 years, and 39.1 per cent were 40 years and over. From the records it is apparent that almost three-fifths of the women were 30 years of age or older.

Negro women were employed extensively in canning. Of those reporting, 24.1 per cent were under 20 years of age, 52.3 per cent were

20 and under 40, and 23.6 per cent were 40 years and over. Comparison of their ages with those of white women employed in this industry makes it evident that more young negro than young white women go into the canneries, for 42.8 per cent of the negroes were under 25 years as compared with 32.7 per cent of the white women in this group.

Nativity.

The records show that of the 736 white women interviewed in the canneries 85.7 per cent were native born and 14.3 per cent foreign born. There was little diversity of nationality, as immigration from Poland and Italy made up about nine-tenths (89.5 per cent) of the distribution. The foreign-born women in the canneries were not Delaware residents but had been brought in from Maryland and Pennsylvania to supplement the labor supply for the canning season.

In the 1920 census the negro population of Delaware was estimated as 13.6 per cent, a relatively greater proportion being found in the two southern counties of Kent and Sussex than in New Castle County. Canneries were the only manufacturing establishments included in the Delaware survey that reported the employment of negro women in appreciable numbers. Four hundred and thirty-one women, almost three-eighths (36.9 per cent) of all those in the canneries whose personal history was secured for this report, were negroes.

Ability to speak English.

The length of residence in the United States of foreign-born workers correlated with their ability to speak English shows several interesting things. In the canneries there were only six women who had been in this country less than five years and none of these spoke English. Of more significance is the inability to speak English of those who had lived here for 10 or more years; 50.5 per cent of the women interviewed in the canneries who reported as many as 10 years in the United States appear in this group. Not quite one-half of the women from non-English-speaking races had acquired at least a rudimentary speaking knowledge of English and the rest spoke only their native languages.

Ability to read and write.

In addition to inquiries regarding the foreign-born women's knowledge of English the women were questioned as to their ability to read and write either English or a foreign tongue. From the number reporting in the study it was found that in the canneries 5.4 per cent of the native white, 45.2 per cent of the foreign-born, and 20.5 per cent of the negro women admitted inability to read any language. The proportion of illiteracy among both the native and the foreign born is noticeable. It must not be overlooked that the

immigrant women working in the canneries were not Delaware residents but migrant help brought into the State for the canning season.

Conjugal condition.

Almost two-thirds of the white women employees who reported conjugal condition were married, and exactly three-fourths of the total number were or had been married. Of the former group almost all named the husband as the chief wage earner, but this does not mean that the wife's earnings were not economically important. In 95 cases females were the chief wage earners and in almost three-fourths of this number (73.7 per cent) the woman interviewed was the mainstay of the family. Practically one-half the cases in which women were the chief wage earners show the women to be widowed, separated, or divorced; in two-fifths of the cases the chief earner was a single woman. Fathers were named as chief breadwinners by 17.5 per cent of all the women in canneries and by two-thirds (66.8 per cent) of those that were single.

Living condition.

All but 3.1 per cent of the white women workers whose personal histories were obtained during the canning survey were living with relatives. All but a small proportion of these women reported that they were living with near relatives. The rural counties of the State offer few opportunities for women workers other than the seasonal work in canneries, and women who must depend entirely on their own earnings usually are forced to leave their home localities. Less than 10 per cent (9.5) of the white women reporting named themselves as the chief wage earners. Male relatives were the chief providers in 83.1 per cent of the cases.

Occupation of chief wage earner.

Only three occupations, farming, transportation, and general labor, were reported as the source of earnings for male relatives by any appreciable number of women employed in canning. Among the occupations of the husbands reported as chief wage earners were the following:

Baker.	Creamery worker.	Machinist.
Basket maker.	Engineer.	Meat-factory worker.
Blacksmith.	Farmer.	Mechanic.
Boiler tender.	Fireman.	Metal-works employee.
Box maker.	Garbage-wagon driver.	Odd-job man.
Brass works employee.	Gas-company employee.	Oyster laborer.
Builder.	Grocery worker.	Painter.
Bus driver.	Ice-plant worker.	Policeman.
Cannery worker.	Laborer.	Printing-office worker.
Car loader.	Lighthouse keeper.	Railroad employee.
Carpenter.	Lumber-mill worker.	Road builder.

Sailor.	Storekeeper.	Watchman.
Salesman.	Surveyor.	Water-department em- ployee.
Sawmill worker.	Tailor.	
Sea captain.	Timber cutter.	
Stevedore.	Trucker.	

Of the women who themselves were the chief wage earners, the seasonal work in the fields and canneries was the principal occupation of about four-fifths. Many of the women added to their earnings throughout the year by irregular jobs on neighboring farms, home sewing, domestic service—day's work of various kinds.

Number of wage earners and size of family.

For another aspect of the family status of the women covered by the survey, information was compiled to show size of family correlated with the number and sex of the wage earners. The size and make-up of the families of 705 white women interviewed were tabulated. The families of these women tended to be small, as 61.4 per cent of the women reported that they were living in families of from 2 to 4 persons; 13.4 per cent were in families of 7 or more members. The smaller families had an average of 2.6 wage earners to a family and an average of 1.7 persons to each wage earner.

Among these families the proportion of children was a little higher than that shown for workers in other industries in Delaware, in spite of the fact that the average family was smaller than in the nonseasonal industries. Adults—persons 16 years and over—made up 65.5 per cent of the white families at the canneries surveyed, children 6 and under 16 constituted 24.3 per cent, and children under 6 were 10.2 per cent. In many cases the composition of a migrant family in a cannery camp differed from that of the family as it lived in the home locality. The real family unit has been included in the figures for the 705 white women reporting on this, and a separate tabulation has been made of the age composition of the cannery-camp group. Schedules representative of migrant families were filled out for 166 women. The chief factor of interest in their tabulation is the larger proportion of children shown for these women, 47.3 per cent of the members of migrant families, as against 42 per cent of the same families when at home, being under 16 years of age. This is explained by the fact that husbands and older children who have regular employment usually can not leave home when the wives and younger children go to the canneries, while if the season is good, children old enough to peel tomatoes or help around the cannery generally can find work. The percentage of children under 6 (18.1 per cent) suggests the need of a caretaker at the camp to be responsible for the young children while the mothers are at work, a provision noted at two of the camps visited.

Industrial history.

In spite of the numerous canneries in Delaware it might reasonably be expected that fairly large numbers of women would have been engaged in both regular and seasonal work. Of the white women interviewed in the canneries 357 included experience in industries other than canneries as part of their working life. In general, with a long period of years in regular work the number of seasons spent in canneries was small, and vice versa. Seasonal workers are a distinct group, and it is not customary for regular workers to leave their jobs to go into the canneries, though some women make a practice of doing so.

Age at beginning work.—The majority of the women employed in canneries began to work for wages at an early age. This is especially true of the negro workers.

Age at beginning work	Per cent of women	
	White	Negro
Under 14 years.....	13.0	49.3
14 and under 16 years.....	17.9	25.6
16 and under 18 years.....	20.8	15.3
18 and under 20 years.....	9.8	4.4
20 and under 25 years.....	9.0	3.5
25 and under 30 years.....	5.7	1.1
30 and under 40 years.....	12.0	.8
40 and under 50 years.....	7.0	-----
50 and under 60 years.....	3.4	-----
60 years and over.....	1.4	-----

There were 30.9 per cent of the white women and 74.9 per cent of the negro women whose age at beginning work was under 16 years. The large percentage of the negro cannery workers beginning when young probably is due to the fact that there are many tasks on the farms and in the canneries for which children can be used during the rush seasons. Approximately three-fifths of the white women and 95 per cent of the negro women had been employed by the age of 20. Occasionally women do not enter gainful employment until middle age. Of the white women in canneries 11.7 per cent had not begun their industrial occupations until at least 40 years of age and there was no negro woman whose age at beginning work was as much as 40 years. A larger proportion of the women not yet 30 years of age than of those who were 30 or more at the time of the survey reported having begun work before they were 14.

First job.—About two-thirds of the white women in the canneries had earned their first wages in canning or other seasonal work, and of those who began work in other industries, 29.7 per

cent worked in clothing manufacturing, 7.8 per cent in dressmaking or tailoring, 6.8 per cent in tobacco manufacturing, 5 per cent in textile manufacturing, and 5 per cent in trade. The smallness of the various groups lessens the significance of the numerical distribution, but of the whole group almost 50 per cent had remained for 3 or more years in their first jobs, 1 in 12 remaining there 15 or 20 years.

Time in the trade.—The following figures show the proportions of white and negro women having varying degrees of experience in the trade.

Number of seasons worked in canneries	Per cent of women	
	White	Negro
1.....	19.9	14.8
2.....	23.8	16.4
3 and over.....	56.3	68.9
5 and over.....	37.9	44.5
10 and over.....	19.9	24.1

More than one-half (51.3 per cent) of the white cannery workers who reported their over-all period had industrial histories recording only seasonal work. Of these women, 38.3 per cent, nearly two-fifths, had worked at canning, off and on, during an over-all period of 10 years or more. The actual number of seasons worked by most of the women was not great, but some of them had spent more than 30 seasons in cannery work. It was impracticable to attempt to estimate the time worked in units other than seasons, as hours or days worked generally are not recorded; in fact, all employment arrangements in canneries are quite informal, depending primarily on the abundance of the crops. Though most of the women are irregular workers, large numbers of them look forward to the canning season as an opportunity to supplement the family income.

Tenure of employment with the firm means very little in seasonal work. If there are several canneries in a community the women may work in more than one during the season, while if there is only one cannery there is no choice. Of 733 white women reporting, one-half (49.2 per cent) had been with the present employer only one season. Twenty-two women reported having worked in one cannery for 20 seasons or more.

Number of industries engaged in.—As already noted, of the cannery workers interviewed 51.3 per cent had worked in seasonal occupations only; of the remainder, almost two-thirds had been employed in seasonal work and one regular industry. Examples of the variety of jobs in which the women had had employment are the following.

Schedule No.	Employment in year of survey	Employment in earlier years
1.....	Canning, home sewing.....	Canning, housework, washing, nursing, home sewing.
2.....	Canning, laundry.....	Canning, laundry, housework, garment factory.
3.....	Canning, telephone operating.....	Canning, school teaching.
4.....	Canning, garment factory.....	Canning, garment factory, laundry.
5.....	Canning.....	Canning, washing, cleaning, picking berries, sawing timber.
6.....	Canning, shirt factory.....	Canning, housework, picking berries.
7.....	Canning, dressmaking.....	Canning, dressmaking, shirt factory.
8.....	Canning.....	Canning, oyster shucking, cigar factory.
9.....	do.....	Canning, steel mill, fiber plant, restaurant.
10.....	do.....	Canning, oyster shucking, office cleaning.
11.....	do.....	Canning, matron on boat.
12.....	Canning, paper hanging.....	Canning, paper hanging.
13.....	Canning, berry picking.....	Canning, berry picking, farming, shirt factory.
14.....	Canning, housework, packing fruit, packing oysters.	Canning, housework, shucking oysters, cigar factory.

Migrant families from Maryland reported in many cases employment at oyster shucking. The younger generation was likely to be in cigar making or other manufacturing. A few women had been employed in war industries at some time during the war period.

Number of jobs held during preceding year.—Employment relations in seasonal work are so informal and the duration of the various jobs is so short that a much higher ratio of workers having held more than one job may be expected. In the figures following it is interesting to notice that the age of the worker was not especially significant in regard to the number of jobs held.

Age group	Number of women reporting		Per cent of women who had had during the year—					
			One job		Two jobs		Three jobs	
	White	Negro	White	Negro	White	Negro	White	Negro
16 and under 18 years.....	76	50	51.3	48.0	42.1	48.0	6.6	4.0
18 and under 20 years.....	63	53	54.0	32.1	36.5	58.5	9.5	9.4
20 and under 25 years.....	101	80	71.3	41.3	22.8	53.8	5.9	5.0
25 and under 30 years.....	61	65	67.2	26.2	23.0	66.2	9.8	7.7
30 and under 40 years.....	146	79	72.6	20.8	23.3	64.6	4.1	13.9
40 and under 50 years.....	143	63	66.4	30.2	30.8	60.3	2.1	9.5
50 and under 60 years.....	85	26	67.1	42.3	29.4	57.7	3.5	-----
60 years and over.....	57	12	66.7	16.7	24.6	75.0	8.8	8.3

Jobs before and after marriage.—Of the 522 women who reported the kind of work they had done before and after marriage, 278 (53.3 per cent) had had no employment before marriage, 171 (32.8 per cent) were still employed in the same work as when single, and 73 (14 per cent) reported work before marriage different from that at the time of the interview.

Case histories.—The following cases, digested from the industrial histories of the women, are typical of large numbers of cannery workers.

Case 1.—A woman of 38, husband in a lumber mill, had a daughter of 16 and a younger child. The woman had worked in canneries 17 seasons; had picked berries and sweet potatoes 15 seasons and worked 2 years in a basket factory. The girl of 16 had worked in canneries 3 seasons and in a garment factory 6 months.

Case 2.—A Polish family of seven, father a laborer, lived in Baltimore. Three adults had remained there, and two adults and two children were at cannery. The mother, 47 years old, had worked in canneries 16 seasons, 12 of them with present employer.

Case 3.—A Polish family of six lived in Baltimore. All but one (probably father, not accounted for) were at cannery. The mother, aged 50, had worked for 18 years, irregularly, in packing house. Had come to cannery the last two seasons. The daughter, aged 17, had worked a year in a tin factory and had come to canneries three seasons, one in tomatoes and two in corn.

Case 4.—A migrant family of three—father, mother, and daughter of 18—all working in cannery. The mother, aged 60, born in Poland, had begun seasonal work when 55, spending five seasons picking strawberries. For past four seasons had worked in canneries. Daughter had started work in a cigar factory in Baltimore when 15 and after 2¾ years there and 7 months in a garment factory had gone with parents to a Delaware cannery.

Case 5.—A Polish family of five, father a stevedore, had left father in Baltimore. One child was under 6. The mother, aged 46, had worked in the same cannery 10 seasons. She had picked string beans 10 seasons, and had shucked oysters.

Case 6.—A Polish family of five, father in packing plant ("meat factory"), had left father in Baltimore. One child was under 6. The mother, aged 38, had worked in canneries 20 seasons. She had picked berries and cut corn 24 seasons.

Case 7.—A woman of 54, American born, had married at 23. Husband was a carpenter, busy only two-thirds of the time. When 25 she had found work in the canneries, and since then had put in 20 seasons, the last 5 of which had been with one plant.

Case 8.—An American woman of 60, married at 18, reported that her husband was a night watchman but was usually out of work. Aside from some nursing, this woman's whole industrial life had been spent in the canneries. She had spent 21 seasons in cannery work during an over-all period of 30 years.

Case 9.—A woman of 49 lived with her son, a disabled war veteran who, she said, paid her "pretty good board." For two years before her marriage and 14 years after she had worked irregularly at a number of jobs—in a boarding house, washing, domestic service, and berry picking. She had not worked in the winter for 20 years, but during the last 9 years had been employed for the season at one cannery.

Case 10.—A widow of 57 was living with her son, a farmer. At 19, when she married, she picked berries and did farm work for a few weeks, but later she went into canneries, where she spent 34 seasons, 21 of them with one firm.

Case 11.—A Polish woman of 66, husband a laborer, had worked in canneries 5 seasons. She had picked berries for 20 seasons and, living in Maryland, had shucked oysters for 30 seasons.

Case 12.—A Polish woman of 49, who had worked in canneries 30 seasons, had her two children there, the father remaining in Baltimore. This woman had worked irregularly in packing houses—about 5 seasons in 25 years.

Case 13.—A Polish woman of 58, living in Baltimore, had worked in canneries 33 seasons. In Maryland she shucked oysters (30 seasons). Her daughter, aged 16, in cannery work two seasons, had worked for six months of the past year in a cigar factory.

Case 14.—A Polish woman of 49, at the cannery with her two sons, had shucked oysters every year since she was 15. Had come to canneries last two years only.

Case 15.—A Polish woman of 38, husband a row boss, had come to cannery with him for 20 seasons. Six children at the cannery, three being under 6 years. Woman had shucked oysters before marriage.

Case 16.—An American family of seven had left the father in Baltimore (a dry-docks laborer, out of work). Mother and five children, none of them less than six years old, were at cannery. Mother formerly shucked oysters, but for past year and a half had been in cigar factory. Daughter of 16, also employed at cannery, had worked for two years in tin factory.

Case 17.—An American woman of 43, husband a fireman, had worked in canneries 31 seasons, having begun as a child of 10. Had missed only two seasons since marriage, 23 years ago. Had had no other gainful employment.

Case 18.—A Polish woman of 52, her husband in a brass foundry, had worked in canneries 15 seasons. Her daughter of 16 had worked there 2 seasons. The mother had picked berries for 22 years, off and on, and the daughter had done this the past year.

Case 19.—An American woman of 48, married at 40 but widowed within three months, had supported herself since 18 years of age by doing odd jobs—day's work, farm work, sewing, and 8 or 10 seasons in canneries. "No chance for steady work."

Case 20.—An American woman of 45, married at 13 and living with her husband and five children (two still very young), had worked in canneries 30 seasons. Husband was a farmer.

Case 21.—An American woman of 26, married at 17, no children, had worked in canneries every year since marriage. For first two years after marriage she was in hotel work (kitchen, chambermaid, waitress) and during past year she had picked berries and done washing.

Case 22.—An American woman of 50 had worked in canneries every year since her marriage at 20. Her only other paid work was thinning corn, which had given her a little employment.

Case 23.—A Polish woman of 60, widowed, had worked in canneries ever since she was 20. Her daughter 19, who had worked with her in the canneries for past seven seasons, had been employed two years in a tin factory, at decorating, and three years in a cigar factory.

Case 24.—An American woman of 63 had worked in same cannery 38 years.

Case 25.—A widow of 23, living with her married sister, had gone into the canneries at 10 years of age, had worked there four seasons before her marriage at 14 and eight seasons since that time.

Case 26.—A woman of 39 had worked 25 seasons in one cannery and had been employed irregularly between seasons as a seamstress.

Case 27.—A woman of 57, living with her husband, a carpenter, had worked for 27 seasons in canneries and during 20 years of this period also had worked, irregularly, at nursing and sewing.

Case 28.—A single girl, 20 years old, had come from her home in Mississippi to stay with her brother and his wife in Delaware. In Mississippi she had shucked oysters for six seasons and had been employed at a garment factory irregularly. In the year before the survey she had been employed at a shrimp cannery. She had spent four seasons in vegetable canning and planned to return to Mississippi for the shrimp season.

Case 29.—A married woman of 46 had worked 32 seasons at canning and 11½ years at regular jobs, the latter comprising 11 years in a meat cannery and 4 months in a garment factory.

Case 30.—An American woman of 52, wife of an odd-job man partly incapacitated by bronchial trouble, had worked in canneries for past nine seasons. Ever since 18 years of age she had done housework, washing, nursing, and sewing.

Case 31.—An Italian woman of 55, husband a laborer, had come to cannery from Pennsylvania with her four children—10, 11, 14, and 15—and all worked side by side. Two youngest said they could peel six to eight buckets of tomatoes daily, at 8 cents a bucket. Mother had worked in canneries 25 seasons.

APPENDIX

SCHEDULE FORMS

SCHEDULE 1

This schedule, adapted from the factory schedule in use by the Women's Bureau, and therefore not applicable in every respect, was used for recording the number of employees, plant policies, and data on working conditions in canneries.

U. S. DEPARTMENT OF LABOR, WOMEN'S BUREAU

1. Name of factory..... Address.....
 2. Product..... Person interviewed.....
 3. Number employed:..... Position.....

<i>Day</i>						
	W.	C.		W.	C.	Total
Men.....			Boys.....			
Women.....			Girls.....			
Total.....			Total.....			
<i>Night</i>						
	W.	C.		W.	C.	Total
Men.....			Boys.....			
Women.....			Girls.....			
Total.....			Total.....			

4. Firm's scheduled hours:
 Daily: Begin..... End..... Lunch period..... Rest period..... Total.....
 Saturday "..... "..... "..... "..... ".....
 Shifts "..... "..... "..... "..... ".....
 Regular weekly number of days..... Total weekly hours.....
 Shifts: Weekly number of periods..... Total shifts, weekly hours.....
- Daily: Begin..... End..... Lunch period..... Rest period..... Total.....
 Saturday "..... "..... "..... "..... ".....
 Shifts "..... "..... "..... "..... ".....
 Regular weekly number of days..... Total weekly hours.....
 Shifts: Weekly number of periods..... Total shifts, weekly hours.....
5. Seasonal.....
6. Employment policy:
 Employment manager..... Or centralized method..... Foremen.....
 Records kept.....
7. Subcontract shop..... Home work given out.....
8. Halls.
 Indirect..... Cl..... Nat. lt. o. k..... Art. prov..... Other.....
9. Stairway.....

No.	Location	Wind- ing	Nat. lt. adqt.	Art. lt. prov.	Hand rl. o. k.	Nar- row	Steep	Cl.	Rpr. o. k.	Other

Workrooms. Number.....

10. Floors					11. Aisles			12. Walls				13. Ceiling				
Loc.	Mat.	Rpr.	Cl.	Other	Loc.	Obst.	Nar.	Loc.	Rpr.	Cl.	Lt.	Loc.	Rpr.	Cl.	Lt.	Low
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Notes.....

14. Cng. done by: Girls ----- Men ----- Jant ----- Janitress ----- Other ----- No resp -----
 15. Natural lighting: Type of windows; On how many sides of workroom; Occupations where women face the light; Shades; Awnings, etc -----
 16. Artificial lighting: Kind (general, individual); Shades or reflectors (general, individual) -----
 17-18. Glare or reflection: Describe -----
 19. Heating system -----
 20. Ventilation.
 App. o. k. ----- Art ----- Kind -----
 Loc -----
 21. Special probl.:
 Heat; Cold; Dust; Lint; Humid; Fumes -----
 Other -----
 22. Sanitation. Drinking facilities: Loc ----- Conv. ----- Bblr -----
 San ----- Tank ----- Cooler ----- Faucet ----- Other -----
 Cup, common ----- Individual ----- Kind -----
 23. Washing facilities -----
 If none, where wash -----

No.	Kind	Conv.	Cln.	Repr.	Hot water	Soap fur.	Towels							
							Fur.	Ind.	Paper	Com-mon	Often			
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

24. Toilets: Kind ----- Sep. ----- If none, arrangement ----- Flush, hand ----- Auto
 seat ----- Repr ----- Plb ----- Cl ----- Paper ----- Instr -----

No. T. R.	No. seats	Fl.	Loc.	Conv.	Scrn.	Desig.	Sngl. st. rm.	Row in rm.	Room cell.	Seat encl.	Nat. vnt. o. k.	Vnt. oth. rm.	Art. vnt. o. k.	Lgt. nat. o. k.	Lgt. art. o. k.	Cl.
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

- Total no. seats ----- No. wmn. per seat ----- Cng. done by: Girls ----- Men -----
 Jant ----- Janitress ----- Other ----- No. resp ----- Swept reg -----
 Freq ----- Wrk. hrs ----- Scrub reg ----- Freq ----- Work hrs -----
 25. Service and welfare. Lunch room: Combined with ----- Prov ----- Kind -----
 Loc ----- Equip. o. k ----- Cln ----- Lt. nat -----
 Art ----- Vent. o. k ----- Prov. hot food or drink only -----
 Cooking convns ----- Supr ----- If none -----

26. Rest room: Comb. with _____ Prov. _____ Loc. _____ Equip. o. k. _____ Cln. _____
 Lgt. nat. _____ Art. _____ Vent. o. k. _____ Supr. _____ If none _____
 27. Cloak room: Combined with _____ Prov. _____ Loc. _____ Conv. _____ Lkr. _____
 Shlv. _____ Hngr. _____ Wl. hk. _____ Seats _____ Cln. _____ Lgt. nat. _____
 Art. _____ Vent. o. k. _____ Supr. _____ If none _____ Lkr. _____ Shlv. _____
 Hngr. _____ Wl. hk. _____
 28. Health service: Hosp. _____ Chg. of _____ Dr. reg. _____ On call _____
 First aid _____ Chg. of _____ Med. exam _____ Health rec. _____ Acc. rec. _____
 Comp. _____
 29. Other welfare _____

30. Occupations	Seats			Foot rest		Uniforms							
	Kind	Adj.	No. o. k.	Kind	Need	Needed		Req. by co.	Furn. by co.	Kept by		Kind	Misc. by girls
						Safe	San.			Co.	Girl		
Sit:													
Stand:													
Sit or stand:													

Describe: Opportunity to sit, etc. _____

31. Floor drainage. Gutters _____ Covered _____
 Platforms _____
 Adequate _____
32. Work tables. Arrangement _____
 Conveyors distributing fruit _____ Adequate _____
 Crowded _____
 Convenient height for sitting _____ For standing _____
 Obstructions _____
 Width convenient for reaching _____
 Drained _____
33. Utensils. Pans _____ Buckets _____ Other _____
 Conditions _____
34. Waste removal. Conveyors _____ Adequate _____
 Helpers _____ Sufficient no. _____ Efficient _____
 Receptacles _____ Kind _____ Condition _____
35. Outside privies. No. _____ Distance _____ Separate _____
 Screened _____ Condition of building _____
 Vault: Fly-proof _____ How often cleaned? _____
 Seat covers _____ Disinfectant used? _____
 Number of women per toilet _____
36. Strains, etc. Standing _____ Lifting _____
 Reaching _____ Speeding _____ Cuts _____
 Burns _____ Fruit acid _____

WOMEN'S EMPLOYMENT IN CANNERIES

SCHEDULE 2

Pay-roll information was copied onto this card, one card being used for each woman employee for whom such information was available.

U. S. DEPARTMENT OF LABOR, WOMEN'S BUREAU

Establishment		Employee's No.		Department								
Name							Male	Female	Age			
Address							Conjugal condition					
Occupation							S	M	W	D	N	R
Rate of pay	Piece	Hour	Day	Week	½ Month	Month	Additions					
		\$.	\$	\$	\$	\$	\$					
Days worked	Regular weekly hours	Hours worked this period	Overtime hours	Undertime hours	Earnings		Deductions					
					This period	Computed for regular time						
					\$	\$	\$					
Country of birth		Began work		Time at work		In this trade		This firm				
		Age										
At home		Board		Pay-roll period								
				---- Days ending								

SCHEDULE 3

This schedule was used for the information secured during interviews with the women employed in the establishments surveyed.

U. S. DEPARTMENT OF LABOR, WOMEN'S BUREAU

1. Employer..... Address.....

2. Worker..... Address..... Dept.....

3. Country of birth..... 4. Yrs. in U. S..... 5. Natrlzd..... 6. Spk. Eng.....

7. Lit. (read or write any lang.).....

8. S. M. W. D..... 9. Age..... 10. Age at marriage..... 11. In school last yr.....

12. Living with friends..... Relatives..... Or adrift.....

13. Relationship of chief wage earner..... 14. Occupation.....

15. Size of family: Resident families—

	M	F		M	F
No. 16 yrs. and over.....	At work.....	.....	No. 16 yrs. and over.....	At work.....	.....
No. 6 and under 16.....	“ “.....	.....	No. 6 and under 16.....	“ “.....	.....
No. under 6.....	“ “.....	.....	No. under 6.....	“ “.....	.....
Total.....	“ “.....	.....	Total.....	“ “.....	.....

16. Migrant families

PUBLICATIONS OF THE WOMEN'S BUREAU

[Any of these bulletins still available will be sent free of charge upon request]

- No. 1. Proposed Employment of Women During the War in the Industries of Niagara Falls, N. Y. 16 pp. 1918.
- No. 2. Labor Laws for Women in Industries in Indiana. 29 pp. 1918.
- No. 3. Standards for the Employment of Women in Industry. 7 pp. 1919.
- No. 4. Wages of Candy Makers in Philadelphia in 1919. 46 pp. 1919.
- *No. 5. The Eight-Hour Day in Federal and State Legislation. 19 pp. 1919.
- No. 6. The Employment of Women in Hazardous Industries in the United States. 8 pp. 1919.
- No. 7. Night-Work Laws in the United States. 4 pp. 1919.
- *No. 8. Women in the Government Service. 37 pp. 1920.
- *No. 9. Home Work in Bridgeport, Conn. 35 pp. 1920.
- *No. 10. Hours and Conditions of Work for Women in Industry in Virginia. 32 pp. 1920.
- No. 11. Women Street Car Conductors and Ticket Agents. 90 pp. 1920.
- No. 12. The New Position of Women in American Industry. 158 pp. 1920.
- No. 13. Industrial Opportunities and Training for Women and Girls. 48 pp. 1920.
- *No. 14. A Physiological Basis for the Shorter Working Day for Women. 20 pp. 1921.
- No. 15. Some Effects of Legislation Limiting Hours of Work for Women. 226 pp. 1921.
- No. 16. See Bulletin 40.
- No. 17. Women's Wages in Kansas. 104 pp. 1921.
- No. 18. Health Problems of Women in Industry. 11 pp. 1921.
- No. 19. Iowa Women in Industry. 73 pp. 1922.
- *No. 20. Negro Women in Industry. 65 pp. 1922.
- No. 21. Women in Rhode Island Industries. 73 pp. 1922.
- *No. 22. Women in Georgia Industries. 89 pp. 1922.
- No. 23. The Family Status of Breadwinning Women. 43 pp. 1922.
- No. 24. Women in Maryland Industries. 96 pp. 1922.
- No. 25. Women in the Candy Industry in Chicago and St. Louis. 72 pp. 1923.
- No. 26. Women in Arkansas Industries. 86 pp. 1923.
- No. 27. The Occupational Progress of Women. 37 pp. 1922.
- No. 28. Women's Contribution in the Field of Invention. 51 pp. 1923.
- No. 29. Women in Kentucky Industries. 114 pp. 1923.
- No. 30. The Share of Wage-Earning Women in Family Support. 170 pp. 1923.
- No. 31. What Industry Means to Women Workers. 10 pp. 1923.
- No. 32. Women in South Carolina Industries. 128 pp. 1923.
- No. 33. Proceedings of the Women's Industrial Conference. 190 pp. 1923.
- No. 34. Women in Alabama Industries. 86 pp. 1924.
- No. 35. Women in Missouri Industries. 127 pp. 1924.
- No. 36. Radio Talks on Women in Industry. 34 pp. 1924.
- No. 37. Women in New Jersey Industries. 99 pp. 1924.
- No. 38. Married Women in Industry. 8 pp. 1924.
- No. 39. Domestic Workers and Their Employment Relations. 87 pp. 1924.
- No. 40. State Laws Affecting Working Women. 53 pp. 1924. (Revision of Bulletin 16.)
- No. 41. Family Status of Breadwinning Women in Four Selected Cities. 145 pp. 1925.
- No. 42. List of References on Minimum Wage for Women in the United States and Canada. 42 pp. 1925.
- No. 43. Standard and Scheduled Hours of Work for Women in Industry. 68 pp. 1925.
- No. 44. Women in Ohio Industries. 137 pp. 1925.
- No. 45. Home Environment and Employment Opportunities of Women in Coal-Mine Workers' Families. 61 pp. 1925.
- No. 46. Facts About Working Women—A Graphic Presentation Based on Census Statistics. 64 pp. 1925.
- No. 47. Women in the Fruit-Growing and Canning Industries in the State of Washington. 223 pp. 1926.

* Supply exhausted.

- No. 48. Women in Oklahoma Industries. 118 pp. 1926.
- No. 49. Women Workers and Family Support. 10 pp. 1925.
- No. 50. Effects of Applied Research Upon the Employment Opportunities of American Women. 54 pp. 1926.
- No. 51. Women in Illinois Industries. 108 pp. 1926.
- No. 52. Lost Time and Labor Turnover in Cotton Mills. 203 pp. 1926.
- No. 53. The Status of Women in the Government Service in 1925. 103 pp. 1926.
- No. 54. Changing Jobs. 12 pp. 1926.
- No. 55. Women in Mississippi Industries. 89 pp. 1926.
- No. 56. Women in Tennessee Industries. 120 pp. 1927.
- No. 57. Women Workers and Industrial Poisons. 5 pp. 1926.
- No. 58. Women in Delaware Industries. 156 pp. 1927.
- No. 59. Short Talks About Working Women. 24 pp. 1927.
- No. 60. Industrial Accidents to Women in New Jersey, Ohio, and Wisconsin. 316 pp. 1927.
- No. 61. Minimum Wage Laws: The History of Their Development in the United States, 1912 to 1927. (In press.)
- No. 62. Women's Employment in Vegetable Canneries in Delaware. 47 pp. 1927. Annual Reports of the Director, 1919,* 1920,* 1921, 1922, 1923, 1924, 1925, 1926, 1927.