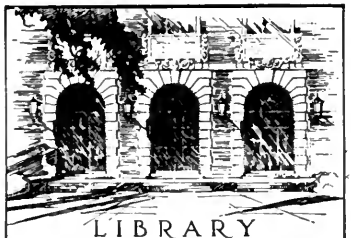


A Survey of Some Fatigue Problems of Rural Homemakers

With special emphasis on home laundering facilities and practices

By NELLIE L. PERKINS
WILMA BEYER
and LITA BANE

Bulletin 514 · UNIVERSITY OF ILLINOIS
AGRICULTURAL EXPERIMENT STATION

FOREWORD

HOUSEWORK demands millions of woman-hours daily in some 30 million homes in the United States, but as housekeeping units are small and scattered, the importance of the total is easy to overlook.

In industry where thousands of workers are under one roof, procedures have been simplified and standardized in order to increase production and protect the worker from overfatigue, ill health, and injury. Improved working conditions in industry have come about thru long study and research. But comparatively little study has been made of housework in order to simplify and standardize household procedures and thus increase the homemaker's efficiency and safeguard her health.

To be sure, households vary widely in many particulars and nobody wants a home to be a factory. It is true, too, that many homemakers find certain kinds of work a source of genuine recreation. Nevertheless, a considerable amount of order and efficient management is necessary if the household is to function satisfactorily. Some homemakers have made it a rule to routinize and standardize all household tasks that have no recreational value for them.

Homemakers on farms usually have some part in gardening, poultry raising, and other farming activities in addition to housework. Their work is further complicated by the fact that they do not have easy access to centrally supplied water, gas, electricity, sewage, and garbage disposal services.

In most farm homes, the family and household laundry is done at home. Many women have found it to be their most fatiguing task. For that reason it was chosen for detailed study.

More than 900 homemakers cooperated in the study, 512 in the preliminary study made with mailed questionnaires and 411 in the present study. Several former staff members, Dr. Julia Outhouse Holmes and Beulah McKey among others, assisted in the preliminary survey.

Out of his long research experience in the field of fatigue of workers in industry, Dr. A. H. Ryan gave generously of his counsel and advice in the formulation of laboratory studies which preceded the study reported here.

LITA BANE

CONTENTS

(CONTENTS, *concluded*)

Urbana, Illinois August, 1945

Publications in the Bulletin series report the results of investigations made or sponsored by the Experiment Station

A SURVEY OF SOME FATIGUE PROBLEMS OF RURAL HOMEMAKERS

With Special Emphasis on Laundering Facilities and Practices

By NELLIE L. PERKINS, WILMA BEYER, and LITA BANE[1]

A SURVEY of farm housing made in Illinois in 1934[6] showed the urgent need for further research in methods of helping farm women with their homemaking problems. Those who were interviewed evidenced a pronounced interest in ways to maintain better health, in acquiring better home equipment, in having the benefits of rural electrification, and in better home management. Without definite information, however, as to the actual conditions under which rural homemakers work, specialists in all home-management fields are seriously handicapped in giving the necessary help, for extension programs to be effective must be built upon the homemaker's own conception of her problems, on existing physical conditions in farm homes, and on the ability of individual families to solve their particular difficulties.

The object of the present study was twofold: (1) to determine what household problems seem to be a special drain on the homemaker's time and energy; and (2) to explore possible methods of studying these problems.

The first step was to ascertain by the controlled-interview method the types and prevalence of homemaking problems, the actual conditions under which rural women work, and the attitudes of these women toward their homemaking problems.

The second step was to study in detail the causes of laundry fatigue. This particular household task was chosen for the detailed study because laundry was reported by large numbers of farm women to be the most tiring of all household tasks and because the inaccessibility of commercial laundries, as well as the cost of their services, forces practically all farm women to do their laundering at home. It was believed also that should this study prove successful, the same type could be used for each of the other homemaking problems found to exist in rural homes.

---

[1]NELLIE L. PERKINS, Professor of Home Economics; WILMA BEYER, formerly Assistant in Home Economics; and LITA BANE, Professor of Home Economics, Head of Department.

REVIEW OF OTHER STUDIES

Very little research has been done on the amount of labor involved in various household tasks, their effect on the homemaker's health, methods of organizing for the best use of time and equipment, and the investment necessary to secure the best equipment. The kinds of studies made during the last 15 years are indicated by the following brief summaries:

A study by Pidgeon[14] in 1937 of the surveys made for the U. S. Bureau of Home Economics shows that laundering takes 5 to 6 hours a week in most farm homes. Time records kept by 2,500 homemakers showed for the Oregon group 5.6 hours weekly spent on the washing; for the South Dakota group, 5.94 hours; the Montana group, 5.43 hours; New York state, 5.33 hours. Other studies, from 1929 to 1940, also indicate that laundering takes up about 10 percent of the total time of running a farm household.

In 1929 Lehmann and Kingsley,[9] working with Illinois farm families, found that it takes 11.2 hours to wash 100 pounds of clothes by hand, 10 hours with a hand-operated machine, and 7.5 hours with a gasoline-driven machine. A later study by them shows that to wash the same amount of clothes with an electric washer takes 8.7 hours. The average weekly wash of the homemakers who worked with them was 37 pounds.

Wilson,[22] working with 311 rural homemakers in Oregon in 1929, found washing to be the most disliked and most fatiguing of all household tasks: 34.6 percent of her cooperators said they disliked it, and 77.4 percent, or five times as many as said any other housework was physically tiring, said it was fatiguing. The average time spent on laundering by these homemakers was 5.3 hours of the average working week of 61.2 hours.

In 1931 Lindquist[10] found in a study of 306 homes that laundering was regarded as second only to child care as a source of fatigue, worry, and friction. Ward,[19] in a study of 237 families in Illinois, found laundering to be the most fatiguing of household tasks and the second most disliked, cleaning and care of the house being disliked still more.

According to a New York state study by Knowles[7] in 1938, 64 percent of 582 homemakers reported washing to be one of the twelve most tiring household tasks; 30 percent listed it as the most tiring.

In 1933 VeNona Swartz,[17] seeking to determine the energy costs of doing specific laundry tasks with different kinds of equipment, compared the various methods of washing, rinsing, wringing, and hanging

up clothes, and of emptying and cleaning laundry equipment. Some of these tasks were found to be light or moderately heavy, but rinsing clothes, wringing by hand or with a hand-power wringer, and hanging clothes with the basket on the floor all made heavy demands on energy.

Enid Sater[16] compared costs of commercial and home laundering. She found that modern power equipment saves time and energy but increases the cost of laundering at home. With fairly expensive power equipment, the cost of the weekly washing for a family of five was found to be about $1.16; with less expensive power equipment, 77 cents. The use of hand equipment reduced the cost to 40 cents.

Commercial laundries at that time offered various family services, but for the three unfinished services most commonly offered the average weekly cost ranged from $1.56 to $2.73 for a family washing, depending on the kind of service chosen and the kind of equipment used for finishing the laundry in the home. Commercial finishing was too expensive for the families with average incomes.

Lehmann and Kingsley[9] compared the cost of washing 1,858 pounds (dry weight) of clothing at home on fifty washdays over a period of one year with the charge made by commercial laundries for washing the same amount of clothes and returning them roughdried. The charge made by commercial laundries was $134.27 more than the cost of doing the washing at home. According to this study the homemaker's time, 136.4 hours spent on the fifty washdays, was worth about a dollar an hour (other studies which show the saving that can be made in the homemaker's time and energy are reviewed on pages 16 and 44).

SCOPE OF ILLINOIS SURVEY

Entire Group: 1940-41

Before this survey was begun in 1940, field workers discussed the project with Home Bureau board members and county chairmen, home advisers, and federal agents. Both Farm Security agents and home advisers volunteered to cooperate in getting farm families to participate in the study. They invited the field workers to explain the project at regular meetings of the Home Bureau and to tell the members just what was wanted in the way of cooperation from rural women.

Group approach, besides saving time and expense, undoubtedly caused more women to participate than would otherwise have done so; for some of the more conservative women, until they were caught up in the group feeling, regarded it as "not the thing to do."

Seventy-one Farm Security clients and 340 Home Bureau members in seven Illinois counties were interviewed in their homes. Controlled interview technics were used. An attempt was made to get not only more details of the whole laundry setup than could be obtained from questionnaires, but also to learn the reasons for the washing technics used and for the arrangement of the laundry equipment. More important than this, the field workers sought to know the women and understand their problems—to learn how and where the laundry fit into the homemaker's whole program of work for the day and for the week and to get as much family atmosphere as the homemaker was willing to share and as the field worker was able to absorb from a home visit.

It was soon learned that some of the material obtained in interviews could not be interpreted until the laundry room had been inspected. Field workers, therefore, made a definite effort to inspect these rooms, but it was not always feasible for them to do so. Even tho homemakers were unusually cooperative, some of them were so sensitive about their lack of conveniences that it embarrassed them to show these rooms. Others either did not think of showing them or did not see the need for showing what they thought they had adequately described. Some found it inconvenient to show the laundry at the time of the visit.

As the study progressed and the field workers improved their technics of entrance, they were invited into more laundry rooms. In all, 251 such rooms were inspected and detailed descriptions of them were recorded. These descriptions helped to clear many points which the interviews had left obscure.

Observed Group: 1941-42

For more detailed study 37 members of the whole group permitted field workers to follow their washings step by step from the sorting of the dirty clothes to the final cleanup after the washing. These homemakers further cooperated by interpreting procedures, by describing various solutions which they had tried in working out their problems, and by making suggestions for further study. Field workers kept running notes (see Appendix, page 79) which covered not only washing procedures but also other washday duties, interruptions, and comments of the homemakers. These notes included floor plans of the rooms where the washings were done, routing maps, and timing of washing processes.

Participants in the Survey

This survey does not necessarily represent a true cross section of rural homemakers in the state because:

1. Contacts were limited to members of the Home Bureau and to families supervised by the Farm Security Administration.

2. As homes were visited only on invitation, the women interviewed probably had a higher-than-average interest in washing problems and in homemaking in general.

3. The laundry rooms inspected were probably better than average. Altho all 411 women were willing to describe their washing facilities, the women who appeared to be less well off were more reluctant to show their washrooms to field workers.

4. The Farm Security homemakers were chosen by Farm Security agents who naturally selected their most cooperative families. Moreover, as this survey was made in the spring, it was limited to families living on hard roads.

5. Counties in the survey were limited because of time and expense to those within a day's ride of the University of Illinois. An attempt was made, however, to choose seven counties typical of the state in general as judged by extension specialists, who know the state.

Home Visits

All first visits were made by appointment, except those to a few Farm Security families who did not have telephones and could not be reached ahead of time by letter. Even when no appointment had been made, the visit was not always a surprise to the homemaker as it was soon rumored about that the field workers were in the neighborhood.

Some homemakers undoubtedly set the scene for the first visit; that is, they gave the house a special cleaning, finished the day's work before the visit, got the children out of the way, and put on better clothes than they usually wore at home. Field workers, wanting to see the women at work under actual everyday conditions, dropped in again at each home where they were invited to call at another time. Some were asked to return any time they were in the neighborhood. In this way over three-fourths of the homes were visited more than once and some as many as ten times.

Visits were made at as convenient a time as possible for the homemakers (field workers did not drop in during meal preparation or the dinner hour). On the later visits the field workers gained firsthand knowledge of the homemakers' problems and also became better ac-

quainted with the homemakers themselves. The interviews were kept as informal and spontaneous as possible and as meaningful for the woman being interviewed. Thus each homemaker was helped to feel that she was contributing to a worth-while study. Most homemakers who were interviewed reported later to home advisers and friends that they had enjoyed the visits and had been helped by them.

Such a "give and take" relationship is essential in this kind of research, which cannot be carried on without adding another burden to the homemaker's busy day and interrupting the program which she has planned for herself and her family.

BACKGROUND OF PARTICIPANTS

Size and Type of Farm

According to the records obtained from 207 families, the farms operated by these families ranged in size from 80 acres to 1,400 acres, 69.6 percent consisting of 150 to 400 acres. Of these 207 families, 55 percent were tenant farmers, 32.8 percent were owners who operated only their home farms, and 7.7 percent were owners who rented extra acreage—generally doubling the farm (records were not obtained for 4.5 percent).

Grain farming predominated, corn being the major crop. General farming was second in frequency; cattle raising, third; and dairying, a close fourth. There were vegetable gardens on all farms, but only for family use. About 90 percent raised chickens in order to add to their income by selling eggs and broilers. A small number of families supplemented their farm incomes by carpentry, trucking, renting farm equipment, or working by the day; but for most the farm was the only source of income.

Modern Conveniences

The homes surveyed range in size from four to twelve rooms (65 percent having six, seven, or eight rooms) and usually house families of four or five members. Altho these farm homes are decidedly better equipped now than they were twenty-five years ago, 40 percent are still without electricity. Many are without central heat, running water, and indoor toilets. In fact few homes have all three of these conveniences, but 89 percent have radios. As shown by the table below, most of these farm families still have to cope with physical situations which complicate their work and consume their time and energy.

Conveniences	*Percent*
Electricity	60
Vacuum cleaner	18
Central heat (coal, the most common fuel)	21
Some form of refrigeration (electric, for the most part, where power lines have been extended)	54
Water heater (coal, wood, or electric, separate from the heating system)	13
Inside toilets	30
Kitchen sinks and drains	70
Hand pump in kitchen	33
Cold water piped into kitchen	29
Hot water piped into kitchen	25
Laundry sinks and drains	18
Cold water piped into laundry	20
Hot water piped into laundry	19
Laundry stoves	21

Activities

As a group, the women who were interviewed are active in their communities. Three-fourths (74.9 percent) belong to the Home Bureau, 7.2 percent are 4-H Club leaders, 35.7 percent do church work, 7.2 percent serve on school boards or school committees, 19.3 percent take an active part in community organizations other than church and school, and 6.7 percent are identified with nearly all community activities.

Hobbies and Interests

Most of these women spend their leisure in avocations closely related to the vocation of homemaking. Of the hobbies and interests listed, reading ranks highest in frequency and, as was brought out by discussion, is related to homemaking thru choice of books and articles read. Vegetable gardening ranks second; chicken raising, third; and sewing, fourth. All the hobbies listed are closely associated with homemaking.

The following data show how 207 of the homemakers surveyed spend their leisure.

	Percent		*Percent*
Reading	46	House plants	16
Vegetable gardening	40	Landscaping	14
Chicken raising	37	Rug making	14
Sewing	35	Music	12
Flower gardening	29	Quilt making	12
Crocheting	20	Knitting	1
Embroidering	18	Other hobbies[1]	13

([1]These other hobbies include poetry reading and writing, photography, basket making, raising canaries, and collecting antiques, old glass, books, and china.)

Most of the women had several interests—a range of two to twelve. Twenty percent had two major interests; 20 percent had three; 15 percent had four; and 8 percent had six. The fact that these women had several major interests may indicate versatility or superficiality or boredom. Field workers, who saw the tangible results of the hobbies, reported both good work and poor.

HOMEMAKERS' PROBLEMS

Most of the farm homemakers interviewed recognized their problems—knew when they needed outside help and when they could work things out for themselves. They understood the difference between the problems that are common to all homemakers, both urban and rural, and those which are due to rural conditions and their family patterns.

The insight of these women into their problems and their active attitude in facing and solving them impressed all who worked with them in these studies. On the whole they had an optimistic and common-sense approach to their problems. Little or no defeatism was evident even where physical conditions were the poorest and health odds the greatest. These women were neither reconciled to existing conditions nor embittered by them. Most of them looked on their problems as a challenge and were not discouraged by them.

Answers to questionnaires (see pages 74 to 79) show that these farm homemakers had an average of three to four (3.4) so-called major problems, and that most of these problems were connected with homemaking activities. The percentages of women who reported different types of problems were as follows:

Laundry	41	Dishwashing	12
Family relations	25	Planning	10
House cleaning	22	Cooking	6
Kitchen arrangement	15		

There are two aspects of these problems to be considered—(1) the work itself, and (2) its dependence on tools and conveniences. Laundering, house cleaning, kitchen arrangement, dish washing, and even cooking are tied up with housing conditions—water supply, heating facilities, power, available space, floor levels, working areas, and light.

This study then reveals at least six major homemaking problems contributing to the worry, anxiety, and fatigue of the homemaker. Each of these problems occurs with sufficient frequency to warrant further intensive study. They also (some more than others, e.g., family

relationships and health) contribute to the problems of laundry fatigue and must be taken into consideration as part of this special study.

Most farm women do all their own work. Not only is there more work to do in farm homes than in comparable urban homes, but there are fewer modern conveniences with which to do it. House cleaning on the farm usually includes paper-hanging, painting, reconditioning floors and woodwork, shampooing rugs, and cleaning upholstered furniture and bedding. Farm washings are larger and dirtier than city washings. Farm cooking, as described by the participants in this survey, is harder work than city cooking, and there is also more of it. Undoubtedly homemaking on the farm is more fatiguing than in town.

Problems due to lack of conveniences. Comparable inconveniences—both as to number and kind—do not affect all homemakers in the same way. For some of these women subjective factors—initiative, ingenuity, ease of adjustment, self-control, and general reactions—seem to play an important part. Some reported definitely whether they liked or disliked a given activity and whether there had been any change in their attitudes due to having conveniences or not having them (where they had had both types of experience). Others could not distinguish between dislike for the activity itself and objections because of poor working conditions. A few women, for example, reported liking to wash regardless of working conditions, while others reported disliking to do it in spite of modern conveniences. The former regarded laundering as a problem but thought it could be solved by a change in physical setup. The latter, regarding the problem as in themselves, disliked the job itself and felt that they would continue to dislike it no matter how convenient the physical setup.

The following figures represent only those cases where women regarded the lack of conveniences as the main cause of their homemaking difficulties, and do not, therefore, agree with those covering housing conditions (pages 10 and 11).

	Percent		*Percent*
No bathroom	41	No sink and drain	9
No water system	29	Insufficient room	8
No electricity	29	Inadequate storage space: closets, cupboards, shelving, etc.	4
Inadequate water supply, both hard and soft	26	Transportation	2
Inadequate heat for house and laundry purposes	17		

Problems in family relationships. It is of great interest that 25 percent of the women in the group not only recognized problems in

family relationships but also could mention them, for family case studies by Beers[1, 2] show that rural women are very conservative about such matters, loyalty to their families making it very difficult for them to discuss family dissension or misunderstandings.

Discussion revealed that these women were genuinely concerned about their problems in family relationships and had a real desire for help. Their feeling was that they themselves were responsible rather than the lack of physical conveniences, which lack they might well have used as an excuse since it obviously was the basic difficulty in many of their other problems. The women were aware of both the need for and the possibilities of help from the University.

Planning problems. The most frequent fatigue factor—other than poor working conditions—was the "hurry" or "pressure" to get things done on time. The 10 percent who attributed their difficulties mainly to their inability to plan their work well looked, also, to the University and the home adviser for help.

Fifteen percent asked for help in planning kitchen arrangement.

Farming problems. Some women had farming problems as well as homemaking problems, discussion of which revealed some of the basic anxieties of homemakers. The most serious problems were caused by the husband's death or by such other circumstances as his ill health or physical handicap (loss of leg or arm), which made it necessary for the wife to manage both the home and the farm. Other problems were associated with inexperience and poor management on the part of husbands. The husband's inability to manage well was in some instances recognized by both and was frankly stated.

A third group of problems grew out of inadequate farming equipment and buildings badly in need of repair. Lastly help was scarce on all types of farms in all counties.

Health problems. While no attempt was made to study health conditions, any comments that homemakers volunteered about health problems were recorded. The figures in Table 1 represent the serious situations that interfered with the homemaker's duties—either her own poor health or the illness or invalidism of another requiring much extra care on her part. In 20 percent of the families surveyed, the homemaker felt the need of medical and nursing care and wanted not only physical help but also more knowledge of nursing and instruction in better technics of nursing. In 28 percent of these 411 families one or more persons were ill: 65 percent of these were homemakers, 15 percent husbands, 11 percent children, and 7 percent aged relatives, usually grandparents.

TABLE 1.—HEALTH PROBLEMS OF 411 ILLINOIS FARM FAMILIES: ENTIRE GROUP
(Record of homemakers' voluntary comments)

Homemaker's statement about kind of illness	Homemakers (411)	Husbands (390)	Children (536)	Aged persons (31)
	Numbers afflicted			
Heart disease	6	1	..	..
Arthritis	6	1	1	..
Asthma	2	..	2	..
Nervous disease	3	2	..	..
Post-operative condition	9	2	..	1
Permanent invalidism (tuberculosis of hip, paralysis, etc.)	..	1	2	5
Accidents (loss of arm or leg)	..	2	1	..
Kidney disease	2	..	..	..
Anemia	1	1	2	..
Stroke	1	1	..	1
High blood pressure	2	1	..	..
Varicose veins	2	..	..	..
Cancer of breast	2	..	..	..
Sinus infection (chronic)	1	..	1	..
Trouble with feet	4	..	..	..
Trouble since birth of child	6	..	..	..
Miscellaneous (diabetes, goiter, tuberculosis, eczema, diseases of the gall bladder)	16	..	..	..
Illness, but kind not stated	12	4	1	1
Blindness	..	2	1	1
Deafness	..	..	1	..
Mental defect	..	..	1	..
Total persons with health problems which interfered with homemaker's effectiveness	75	18	13	9

A summary of the comments of these women reveals that the brunt of the nursing care, with all its contingent anxieties, falls on the homemaker. When she herself is in poor health, she cannot throw off her responsibilities. She suffers discomfort and pain, loses her efficiency, and worries about neglecting her house, her husband and children. When her children are ill, she has not only added work and responsibility but also a mother's natural anxiety. In case her husband is ill, she must care for him, take over his work, manage the finances, and continue her usual work as a homemaker. Her mental burden is usually heaviest during a husband's illness because she has not the comfort of sharing her anxiety with him.

Illness of aged members of the family is physically hard for the homemaker, particularly in farm homes. Old people usually require bedside care, which is doubly hard in a home that does not have piped water and indoor plumbing. Lack of central heating makes it difficult, also, to keep them warm.

About one-third of the reported cases of poor health were either those of old people or of members who had chronic illnesses. In such prolonged cases the special meal planning, tray service, and extra laundry make it almost impossible for the homemaker to maintain her usual standards of household and family care.

KNOWN CAUSES OF LAUNDRY FATIGUE

Laundering requires lifting, carrying, stooping, stretching, standing, and walking—all known to be fatiguing, especially if prolonged. These demands on energy can usually be reduced without affecting efficiency or standards. Equipment, arrangement, space, and working heights and surfaces become important in the solution of this problem. Three earlier studies which have to do with the saving of the homemaker's time and energy are especially helpful.

Swartz[17] found that the energy cost of laundry tasks is two to three times that of resting. Putting up and removing the clothesline takes 135 percent more energy than resting; wringing clothes by hand, 138 percent; emptying the washing machine, 139 percent; cleaning the laundry equipment, 149 percent; rinsing clothes, 161 percent; washing clothes by hand, 191 percent. Hanging up the clothes when the clothes basket is on the floor takes 184 percent more energy than resting, but the cost can be cut to 118 percent by putting the damp clothes on a wheeled table or a small cart that can be easily drawn about. This saving, made by reducing the stooping and carrying, amounts to about 35 percent.

The Lehmann-Kingsley study[9] showed that in washing 100 pounds of clothes without a machine, the rural homemaker walked 10.2 miles; with a hand-operated machine, 7.1 miles; with a machine operated by a gas engine, 6.4 miles; and with an electric machine, 4.47 miles. The distance walked per washing by homemakers using electric machines ranged from 3.37 miles to 5.12 miles. (If these figures are to give an accurate idea of the energy that goes into laundering on the farm, it must be remembered that these homemakers usually carried water or clothes while walking the miles listed.) According to this study the efficiency of the laundry operations, as measured by time required, distance walked, and amount of electricity used, was affected by the type of washer and the location and arrangement of equipment.

Wilson, Roberts, and Thayer,[23] with 562 homemakers in Oregon and Washington, worked out standards for working-surface heights and for other space units. These standards, based on the preferences and physical requirements of the homemakers who cooperated in the study, are a valuable contribution both to homemaking and to commercial designing. They may be profitably used in the designing of work units in houses built for rent, for sale, or for owner occupancy, and in the manufacturing of cabinets, sinks, chairs, and other equipment that will be of a comfortable height for the average woman.

All the women of the present study were asked what movements of the laundering processes — standing, walking, lifting, carrying, stretching, and stooping—they found most fatiguing. Few objected to the standing (the major complaint in ironing) as standing is less tiring when there are interruptions such as tending the fire and walking to washer or tub.

Altho there was considerable complaint about all the other movements, they were not all reported as equally fatiguing and not all listed by all women.

Some of these complaints were definitely associated with ill health —post-operative conditions or strained back muscles. According to their own reports, however, 81 percent of these women were in good physical condition and yet found these movements fatiguing. Carrying was complained of most, and next, stooping. Because of the inconvenience of many farm homes, the frequency of these complaints may be due to the amount of movement rather than to the type. Certainly in farm homes where water, wet clothes, and equipment must be carried, washing requires more carrying than stooping. Altho there is too much stooping, all the washing operations, from collecting the soiled clothing thru taking down the clothesline after the last articles are dried and in the house, require more carrying.

A DETAILED STUDY OF LAUNDRY PROBLEMS

In this survey interviews and home visits showed definitely that the natural fatigue of washing is greatly increased not only by lack of suitable equipment but also by inefficient management. It was also apparent that many washday burdens can be made easier. The following section describes the size and composition of the families and covers some of the physical conditions found in the 411 homes visited. Obviously most of these conditions can be improved.

Size and Composition of Families

Size of family in this survey (Table 2) refers not to the true members of the families but to all persons washed for. Members living away from home were not counted unless they sent their laundry home. Relatives, friends, and hired helpers living in the home were counted if their laundry was regularly a part of the family wash.

The number of adults and children washed for is shown in Table 3.

TABLE 2.—SIZES OF FAMILIES IN GROUPS SURVEYED

Number in family	Entire group (411 families)		Observed group (37 families)	
	Number of families	Percent of families	Number of families	Percent of families
1	..	..	..	..
2	70	17	5	13
3	108	26	8	22
4	113	28	7	19
5	58	14	8	22
6	39	10	4	11
7	8	2	2	5
8 to 12	15	4	3	8
All families	411		37	

TABLE 3.—NUMBER OF ADULTS AND CHILDREN IN FAMILIES SURVEYED

	Total members	Adults (18 and over)	Children (under 18)
Entire group, 412 families	1 637	1 095	542
Observed group, 37 families	169	103	66

Adults in interviewed groups. The adults consisted of 822 parents, 138 children over 18 years old, 92 relatives (44 percent were grandparents), and 42 hired helpers. A few grandparents were able to help out by doing small chores, but others required nursing care. All but 6 of the farm helpers were men whose heavy work clothing added to the laundry problem.

Children in interviewed groups. In 255 families (62 percent of the entire group) there were children or grandchildren under 18.

Age	*Number*	*Percent*
Under 6 years	145	26.7
6 to 14 years	246	45.5
15 to 18 years	151	27.8

The two younger groups of children, according to the mothers' reports, were not able to help much with the washing. The older group, still in school, could not help much during laundry hours but generally did chores before and after school.

Size and Types of Washings

In the 37 families whose washings were observed, machine loads per washing ranged from 4 to 12 and averaged 7. Of these women 66 percent did their washings in 3 to 4 hours; 25 percent, in 4 to 5 hours; and 8 percent, in 2 to 3 hours. This time did not include the

time spent in cleaning up the washroom, putting away equipment, and taking down the clothes when dry.

The entire group (411 families) were asked three questions about their use of napkins, tablecloths, and sheets. Fifty-six percent used paper napkins (27 percent do not use napkins); and in the observed group, 94 percent use paper napkins. To save time and labor, oilcloth, paper doilies, and painted table tops are used instead of tablecloths. The tablecloths listed are used only for company. Fifty-seven percent of the entire group wash only the bottom sheet weekly, except in summer when 8 percent of these change both sheets weekly; 41 percent regularly change both sheets weekly. Of the women whose washings were observed, 78 percent wash only the bottom sheet weekly and 17 percent wash both sheets. Other customs of changing sheets are used by 2 percent of the entire group and by 4 percent of the observed group.

Storing and Sorting Facilities

Finding a place for the soiled clothes (see Table 4) is a problem for most farm homemakers. Few of these women have clothes chutes to the laundry room in the basement or hampers in the bathroom; in fact, 70 percent of the women interviewed do not have indoor bathrooms and 73 percent are without basements.

Most of the women in the observed group store the soiled clothes in open baskets or cartons which they keep for this purpose in hallways and closets. Altho complete information about storage was not obtained from all the 411 women, it was learned that soiled clothing is piled on the floor in many homes and is stored in all rooms in the house, even in the pantry. The very dirty clothing worn in barns and fields is, on the whole, kept separate from other wearing apparel and household linens and is stored in entrance hallways and outbuildings, but in some

TABLE 4.—STORING AND SORTING PRACTICES OF 37 FARM HOMEMAKERS: OBSERVED GROUP

Container used	Percent	Place of storage	Percent	Place of sorting	Percent
Baskets	64	Basement	31	Floors	65
Hampers	8	Bedrooms	9	Table	5
Boxes	8	Bathrooms	4	Bench or bath tub	5
Floor	4	Utility rooms	4	Combinations	24
Table	4	Storage rooms	4		
Combinations	12	Closets	13		
		Porch	4		
		Wash house	4		
		Combinations	22		

homes all clothing is heaped together regardless of place of storage or of degree and kind of soil.

Almost none of the women in the observed group have any conveniences for sorting the clothes. Most (65 percent) sort in the room where they do the washing, piling the clothes on the floor whether it is wood, cement, or dirt, whether it is clean or dirty, smooth or rough.

Some use is made of bushel baskets, old tubs, newspapers, and old rag rugs to keep clothing off the floor, but most sorting is done on the bare floor. This may or may not add dirt to the clothes; but to stoop while sorting and when picking up clothes for the machine does make the work more tiring.

Day of Week and Time of Day of Washing

Washing presents a real problem in management, for it is an extra job that must be worked into the regular day's work. It was interesting, therefore, to note the reasons women gave for their choice of time to wash, both as to day of week and hour of day.

Eighty-seven percent prefer a regular washday (Table 5) and for the most part consistently follow a schedule, bad weather being the one good excuse for changing washdays, but 13 percent prefer movable washdays, their choice depending on other work and family situations.

While Monday is the most popular washday, every day in the week except Sunday is used, Tuesday being the second choice and Wednesday, the third. Thus most of the women wash during the first of the week, only 3 percent using Thursday, Friday, and Saturday regularly.

TABLE 5.—TIME AND FREQUENCY OF WASHING

	Entire group	Observed group
Time of day	*perct.*	*perct.*
Forenoon	97	97
Afternoon	3	3
Day of week		
Monday	75	54
Tuesday	7	11
Wednesday	2	0
Thursday	1	0
Friday	1	0
Saturday	1	30
Any day convenient	13	5
Interval		
Weekly	87	65
Twice weekly	5	8
Every two weeks	14	3
Combinations	1	24

NOTE—There were some seasonal variations in both time and frequency of washing.

Reasons given for choice of day show clearly that women regard washing not only as a major undertaking but also as an extra job which interferes with other household tasks. The first of the week is popular because the women want the washing out of the way. Those who choose the end of the week do so because they are too tired to do heavy work after a strenuous Sunday, because they want clean clothes for the weekend, or because they have more help later in the week.

Practically all the women wash in the morning. The morning workers reported that they do not object to doing small chores along with the washing; in fact they prefer to "sandwich them in with the washing."

Starting time for morning washing	*Percent*
4:30 to 7:00	21
7:00 to 8:00	47
8:00 to 9:00	19
9:00 to 10:00	9
No definite time	7

These figures are for the spring of the year only, as that was the time the survey was made. There are seasonal differences in the hour at which washing is regularly started, but accurate figures on this point were not obtained. The tendency, however, is to begin the washing earlier in summer than in winter, as most families get up earlier in summer. The men go to the fields early. The women, then, are free to begin the washing, and they like to get it done as soon as possible to avoid working during the hottest part of the day.

According to the above figures, over three-fifths of the morning washings are started before 8 o'clock. Seven o'clock is the most popular starting time in the in-between seasons, altho over one-fifth of the washings are started between 4:30 and 7:00. Some women choose the very early hours in order to have the children help before they leave for school or work; others plan to get the main washing out of the way before breakfast so as to have no interference with the usual morning's work.

Those who wash in the afternoon do so because they cannot finish the washing in the morning and take care of the other forenoon duties without feeling too hurried or without "skimping on the other work." They prefer to block their activities in order to reduce hurry and confusion and to experience more frequently the satisfaction of completing work units of short duration. Those with small children often wash in the afternoon because of greater freedom from interruptions, as the children need less care in the afternoon. (The washrooms,

except where kitchens are used, are neither suitable nor safe for children. This means that their play must be supervised in another part of the house or yard.)

A few women sometimes wash in the evening because they have small children, because they need help with the washing, which help is available only in the evening, or because the regular day's work is too heavy to include washing (these women were helping regularly with the farm work in addition to doing their own house work).

Frequency of Washing

Eighty-seven percent of the women wash once a week regularly (Table 5) because weekly washings fit into their schedule of work better than any other arrangement. Size and type of washing apparently have little to do with choice, as both large and small families make up the group who prefer to wash weekly.

All of the 14 percent who wash every two weeks have families of five or fewer members (majority, 2 and 3). Washing only every two weeks, they reported, saves water, soap, time, and energy. Most of the time and energy saved is that required for getting out the equipment and cleaning up afterward.

The families (5 percent) who wash twice a week have 4, 5, 6, 9, and 10 members. As the number of families who have more than 6 members is small, the figures for these families may have no real significance.

It is well to remember that this survey was made in the spring, as there are seasonal differences in the frequency of washing. Altho the majority of these women (88 percent) maintain the same schedule thruout the year, 11 percent change schedules.

The summer months, with larger washings—true generally in all households but especially in farm homes—show a 17-percent increase in the number of women who wash twice a week. This number includes small families of 2 or 3 members as well as larger ones. In most instances, however, the women who wash twice a week do so from choice rather than from necessity, for the washings, while large, are not always large enough to preclude completion in a single day. The reason these women prefer to wash twice a week is that they experience less fatigue doing smaller washings in spite of the twice-weekly chore of getting out the equipment and of cleaning up after the washing.

The major change in schedule occurs in the winter months: 73 percent of those who wash weekly in the spring wash only every two

weeks in winter. Nine percent shift from weekly or twice-weekly schedules to longer intervals, their schedules depending on clothing needs and washing conditions.

While smaller washings in winter make it possible to wash less frequently, the reasons given for the change in schedule are always associated with the increased hardships of washing in cold weather.

Even among those who maintain the same schedules thruout the year, 15 percent change washrooms during the winter, generally because the washroom is not heated. The difficulties of carrying water and the added exposure also are reasons given for changing the washroom. Thus it is obvious that weather conditions cause serious problems on the farm.

Physical Plant, Washing Facilities and Practices

An earlier survey, made in 1939-40 with mailed questionnaires, revealed certain physical conditions (Table 6) which make washing hard in farm homes; namely, the very large washings, the lack of running water, the great amount of long-distance carrying, and in many instances the lack of a good place to wash. Another fact, however, of more hopeful significance was also revealed: 98 percent of the women who cooperated in this earlier study had power machines.

This survey, by the controlled-interview method, supplied more information (Table 7) about actual working conditions than could be obtained from the check sheet of the mailed questionnaires. Even so, descriptions given by the homemaker of her washing practices often failed to give a full picture of her problems. Inspection of the washrooms, therefore, was found to be almost necessary for full appreciation of the physical setup. This was realized at the time of the interview but became even more apparent as the field workers observed the regular weekly washings of 37 homemakers, following the washings thru step by step from the sorting of the soiled clothes to the final cleanup of the laundry room.

The most valuable information (Table 8) of the whole survey came from these observations of complete washings. The main body of discussion on practices is therefore based on the observed washings because the problems which the field workers noted in these washings have a bearing on all homemaking problems. The results of the complete survey of the 411 homemakers were, for interpretation, checked against the results of this observed group.

In all homes reached by the survey the laundry was done by the homemaker with or without help from other members of the family.

TABLE 6.—DATA OBTAINED FROM LAUNDRY QUESTIONNAIRES: 512 FAMILIES IN 22 ILLINOIS COUNTIES IN 1939-40

Number in family	1	2	3	4	5	6	7	8+	Total	Percent
Number of families	3	94	111	118	90	55	26	15	512	
Number of families using facilities, methods, and materials indicated										
Soft water	3	68	96	96	78	47	24	14	426	83
Hard water	..	34	28	31	22	15	7	4	141	28
Water softener used	..	25	20	26	23	14	5	4	117	23
Who carries water										
Homemaker alone	1	27	28	28	17	13	7	2	123	39
Homemaker with help	..	10	7	9	14	2	4	3	47	12
Someone else	..	19	34	35	24	12	5	5	134	43
Not stated	..	..	..	..	..	..	..	..	8	..
Hand pump in dwelling	..	37	51	60	44	24	10	5	231	45
Piped cold water	2	42	44	46	41	28	14	8	225	44
Piped hot water	2	35	31	34	27	20	12	8	169	43
Where laundry is done										
Basement	2	37	38	37	33	19	9	6	181	32
Outdoors	..	14	20	14	13	6	5	3	75	14
Kitchen	1	17	26	29	15	14	4	3	109	18
Special room or washhouse	..	34	41	52	35	21	11	5	199	35
Equipment										
Power machines	2	81	100	113	86	53	25	15	475	93
Hand machines	..	7	3	1	1	..	1	..	13	3
Fixed tubs	..	13	19	16	8	14	..	3	73	14
By hand	..	3	..	..	..	..	..	..	3	..
Soak white clothes	..	39	40	45	48	20	12	6	210	41
Soak colored clothes	..	21	25	30	27	10	7	3	123	24
Use soap flakes	3	74	74	73	54	36	18	11	343	70
Use bar soap (commercial)	1	57	79	88	69	35	19	10	358	70
Use homemade soap	..	23	26	47	32	18	14	2	162	32
Distance water is carried										
Range, feet	8	2-100	5-500	4-660	6-75	10-300	4-250	12-30	...	..
Average, feet	8	23.6	29	39.3	21.5	35	37	23.7	...	..
Washer loads per week per family										
Range	3-4	3-12	4-14	3-18	4-12	3-12	4-12	8-20	...	..
Average	3.5	5	6	6.5	7.5	7.2	8.4	13.2	...	..
Tubfuls of water for soaking, average	..	1.4	1.16	1.4	1.4	1.4	1.9	1.1	...	..
Times suds are changed in machine										
Range	0-2	0-3	0-3	0-4	0-4	0-3	0-3	0-4	...	..
Average	2	1.1	1.6	1.3	1.4	1.4	1.5	2.14	...	..
Number of rinse waters for white clothes										
Range	2	1-3	1-3	1-4	1-3	1-3	1-3	2-3	...	..
Average	2	1.9	1.9	1.98	1.9	1.9	2	2	...	..
Number of rinse waters for colored clothes										
Range	2	1-3	1-3	1-4	1-3	1-3	1-3	2	...	..
Average	2	1.9	1.9	1.9	1.9	1.9	2	2	...	..
Number of tubfuls of water for rinsing										
Range	2	1-5	1-4	1-9	1-6	1-4	2-6	1-10	...	..
Average	2	2	2	2.2	2.2	2	2.7	4	...	..

While the inaccessibility and expense of commercial laundries were the reasons given for doing the laundry at home, a preference for home laundry was frequently expressed. In 98 percent of the families the entire laundry was done at home, and in the other 2 percent the home-

TABLE 7.—DATA OBTAINED FROM SURVEY OF HOME LAUNDRY CONDITIONS: ENTIRE GROUP, 411 FAMILIES

	perct.
All of family laundry done at home	
Yes	98
No	2
Frequency of family laundry[a]	
Weekly	88
Twice a week	5
Every two weeks	14
Other intervals	2
Time of day washing is done	
Forenoon	98
Afternoon	2
Have a washing machine	
Yes	96
No	4
Type of washing machine	
Cylinder or vacuum	2
Agitator	96
None	2
Power with which machine is run	
Electricity	58
Gasoline	38
By hand	2
Information not obtained	3
Kind of tubs used	
Movable	97
Stationary or built-in	3
If movable, how they are moved	
Castors	40
Must be lifted	60
Position of the tubs	
Placed against wall	6
Free on all sides	94
Place where laundry work is done[a]	
Kitchen	25
Basement	27
Utility room	12
Back porch	28
Outside building	24
Other places	1
Where wash water is emptied	
Floor drain	34
Sink drain	12
Ground outside	54
How water from tubs is emptied[b]	
Dipped from tub and carried in pails	22
Run from drain in tub to floor drain	32
Drained from tub and carried in pails	58
Tub carried	4
By a pump	0
Other means	4
Customs about washing sheets	
Both sheets every week	41
Bottom sheet each week	57
Other custom	2
Where clothes are dried in winter[b]	
Outdoors	17
Washroom	8
Basement	23
Storeroom	1
Upstairs bedroom	18
Living room	14
Dining room	10
Kitchen	15
Where clothes are dried in summer	
Outdoors	100
Use of napkins and tablecloths	*perct.*
Use paper napkins	56
Tablecloths	5
None	27
Help with carrying water or doing the washing	
Yes	72
No	28
Artificial light for laundry	
Always	4
Usually	5
Sometimes	13
Seldom	24
Not at all	54
Type of artificial light used	
Electric	60
Gas	2
Gasoline	1
Kerosene lamps	36
Kind of finish in laundry rooms	
Painted (shiny)	3
Painted (dull)	30
Papered	17
Whitewashed	3
Unfinished plaster	4
Unfinished wood	22
Concrete	21
Source of hot water[b]	
Heating on kitchen range	49
Stove in laundry room	28
Hot water in faucets	22
Other means	6
Method of obtaining water[b]	
Hand pump in dwelling	40
Hand pump out-of-doors	36
Faucets	21
Pump and faucet	3
Use of natural soft water	
All laundry	47
Soft for suds only	28
All hard water	25
How water is put in tubs	
By hose	8
Carrying in pails	82
Faucets over tubs	8
Other means	2
Laundry room uncomfortable or inconvenient in any way	
Yes	83
Homemaker's attitude toward washing	
Like to wash	52
Do not mind	32
Do not like to wash	16
Distance of laundry from telephone	*feet*
Range	12-60
Distance of laundry from kitchen stove	
Range	15-40
Distance of water supply from washing equipment	
Range	3-330
Average	25.3
Distance waste water is taken from tubs for disposal	
Range	6-100
Average	31

[a]Varied with the seasons. [b]More than one place, source, or method used.

TABLE 8.—HOME LAUNDRY CONDITIONS: OBSERVED GROUP, 37 FAMILIES

	perct.
All of family laundry done at home	
Yes	100
Frequency of family laundry	
Weekly	65
Twice a week	3
Every two weeks	8
Other intervals	24
Time of day washing is done	
Forenoon	97
Afternoon	3
Have a washing machine	
Yes	100
Type of machine	
Cylinder	5
Agitator	95
Power	
Electricity	78
Gasoline	22
Kind of tubs used	
Movable	97
Stationary	3
If movable, how moved?	
Castors	49
Must be lifted	51
Position of tubs	
Placed against wall	22
Free on all sides	78
Place where laundry is done	
Kitchen	8
Basement	38
Utility room	16
Back porch	16
Outside building	8
Use two washrooms	14
How water is put in tubs	
Hose	16
Carry in pails	78
Faucets over tubs	5
Where wash water is emptied	
Floor drain	30
Sink drain	30
Ground outside	40
How water from tubs is emptied	
Dipped from tub and carried in pails	46
Drain in tub carried water to floor drain	13
Drained from tub and carried in pails	24
Tub carried	3
Pump	3
Combination	3
Other methods	8
Customs about washing sheets	
Both sheets every week	17
Bottom sheet every week	78
Other custom	4
Where clothes are dried in winter	
Outdoors	9
Washroom	4
Basement	56
Storeroom	4
Upstairs bedroom	4
Living room	4
Kitchen	17
Artificial light for laundry	
Always	3
Usually	22
Sometimes	5
Seldom	70
Type of artificial light	
Electric	78
Kerosene	22
Kind of finish in laundry room	
Painted (dull)	32
Papered	14
Unfinished plaster	5
Unfinished wood	14
Concrete	30
Brick	3
Other	3
Source of hot water	
Kitchen range	38
Stove in laundry	24
Piped hot water	24
Other means	5
Combinations	8
Method of obtaining water	
Hand pump in dwelling	38
Hand pump out-of-doors	11
Faucets	40
Combination	8
Drawn by hand	3
Hard or soft water	
Soft for suds only	75
All hard water	25
Where clothes are dried in summer	
Outdoors	100
Use of napkins and tablecloths	
Paper napkins	94
Tablecloths	16
Help with carrying water or doing the washing	
Yes	69
No	30
Homemaker's attitude toward washing	
Like to wash	40
Do not mind	49
Do not like to wash	11
Distance to clothesline	*feet*
Range	10-40
Average	24.7
Distance of water supply from washing equipment	
Cold water, range	1-70
Average	13.9
Hot water, range	2-50
Average	7.6
Distance water is taken from tubs for disposal	
Range	1-50
Average	12

maker took the laundry to a friend's or relative's house because of greater convenience or for companionship. No use was made of commercial laundries either for badly soiled heavy pieces, such as overalls, or the larger pieces and "specials," such as blankets, mattress covers, drapes or curtains.

Washrooms. With 62 percent of all participants reporting that they wash in kitchens, basements, or utility rooms (Table 9), the first impression is that these rural women are fairly well equipped for washing. Without the facts, the major concern would be for the women who wash on porches or in outside washrooms. Investigation, however, revealed that *all five types* of washrooms have serious defects both in kind and in number. It was found that laundries are not planned for in rural homes. The women wash wherever they can, using to the best of their ability the facilities at hand—this means that a washroom is improvised wherever space is available. Improvised washrooms in rural kitchens, basements, and so-called utility rooms (euphemistic for spare room on the same floor as the kitchen) are seldom equipped with running water, adequate light and heat, or even with enough working space.

Detailed descriptions of 411 washrooms and inspection of 251 of them revealed a general lack of modern conveniences.

Washing on the porch may not be too much of a hardship in summer, altho porches usually are too small to provide enough working space and are not equipped with water or water-heating facilities. Many of the women reported that they like washing on the porch because they enjoy being out of doors; they commented on the fresh air, the better light, and sometimes on the view.

In winter the porch certainly is not a suitable place for the washing. Even porches that are inclosed, whether with canvas or with glass, are uncomfortably cold, being heated only slightly by the hot suds and sometimes by heat from the kitchen if the door can be left open without cooling the entire house. Whether the porch can be heated from the kitchen depends on room arrangements and kind of heat.

TABLE 9.—TYPES OF WASHROOMS USED BY HOMEMAKERS

	Kitchen		Basement		Utility room		Washroom		Porch	
	number	*perct.*	*number*	*perct.*	*number*	*perct.*	*number*	*perct.*	*number*	*perct.*
Entire group.....	99	24	108	26	48	12	96	23	111	27
Observed group...	3	8	14	38	6	16	3	8	6	16

NOTE—In both groups there were a few women who washed in whichever room could be used with the least effort at the time of the washing.

Washrooms in outside buildings are even bleaker than porches. Twenty-seven percent of those inspected are entirely without heat. Most of the others have only small laundry stoves or old ranges for heating the wash water. Such stoves usually supply almost enough heat for small rooms. Most outside washrooms, however, are in larger buildings that are used for other purposes. They are crowded and cold, and are usually without washing facilities or drying space for the clothes.

The homemaker who washes in an outside building in winter faces real danger of exposure. Her biggest problem is carrying the water—both hot and cold—for suds and rinses, and again for disposal. Then there is the problem of getting the damp clothes out of the building and on the line. A few women hang all clothes outdoors all winter, but most of these women, during the coldest months, hang only a few pieces out, and these only because of not having enough drying space in the house. But whether the house or the yard is used for the drying, an outside washroom is a serious health hazard in winter.

Size of washroom.—It was hard to estimate the size of washrooms in terms of square feet. In basements, kitchens, porches, outside buildings, and utility rooms that are used for other work, permanent equipment, such as stoves, refrigerators, and cream separators, often makes it impossible to have any convenient arrangement of the washing equipment, which is moved in and out once or twice a week.

The real questions are what portion of the floor space can be used for laundry purposes and what is the relative position of this space to the water supply, heat, source of light, and the drain. The shape of the space is also important, for the best arrangement of rinse tubs and washer is impossible in a long, narrow space. A small space of the right shape and near water, the water heater, and the drain is much better than a large space in a room where there is a clutter of other equipment and where working units are too scattered.

The floor space of washrooms reported in this survey ranged from 50 to 300 square feet. The larger rooms, when inspected, were often found to be less convenient than the smaller ones. Except for drying clothes, there was no advantage in the greater space, and most of these washrooms were not equipped or used for drying. Very efficient work was observed in rooms as small as 50 square feet.

Lighting.—As industrial research has shown that improved lighting, color, and condition of walls lessen fatigue and increase the production of industrial workers, an attempt was made in interviews to obtain

TABLE 10.—USE OF ARTIFICIAL LIGHT DURING WASHING

How often used	Entire group	Observed group	Kind of light	Entire group	Observed group
	perct.	*perct.*		*perct.*	*perct.*
Always	4	3	Electric	60	78
Usually	5	22	Gas	2	..
Sometimes	13	5	Gasoline	1	..
Seldom	24	70	Kerosene	36	22
Not at all	54	..	Other kinds[a]	..	..

[a]A small number used other kinds of light not listed.

information about lighting, color, and state of walls in these washrooms (Tables 10 and 11). Of course one needs strong light for such jobs as removing stains and checking soiled parts of garments.

Fifty-four percent did not need to use artificial light while washing. The rest were dependent on it, half of them using it all the time. While 60 percent had electric light, 36 percent were still using kerosene lamps. In 251 laundries visited, neither the wattage used nor the location of light fixtures met the standards recommended by lighting engineers.

Window lighting was almost equally poor. The location of windows rather than size and number is important. In many washrooms washing equipment could not be placed near the windows because of furnace pipes, fruit shelves, or benched walls. Some windows open under porches, or onto extensions where buildings are too close to admit light.

Wall finish.—Until washrooms were inspected, the data on condition and finish of walls (Table 11), obtained from questionnaires, were of little value. As was to be expected, the washrooms in kitchens and on porches were usually the only ones that were painted. Walls in these were in better condition than in any other washrooms. Because

TABLE 11.—WALL FINISHES OF WASHROOMS

Kind	Entire group	Observed group	Color	Entire group	Observed group
	perct.	*perct.*		*perct.*	*perct.*
Painted (shiny)	3	..	White	21	26
Painted (dull)	30	32	Cream	15	17
Papered	17	14	Green	3	3
Plaster, unpainted	4	5	Gray	31	40
Wood, unfinished	22	14	Brown	39	14
Concrete	21	30	Other colors	12	..
Whitewashed	3	..			

NOTE—Some of the women used more than one washroom.

kitchens and porches are livable parts of the house, they share in major improvements and upkeep. Outbuildings and utility rooms which were used for service and storage were usually of unfinished plaster or wood, and basement walls were of concrete or stone blocks, with or without whitewash or paint. Of the interiors of the observed group, all of which were inspected by the field workers, 26 percent were painted white, 17 percent were painted cream, 14 percent were papered —mostly in browns and dark grays—14 percent were unfinished wood, and 30 percent were unfinished stone or cement blocks.

The white and cream surfaces were not always recognizable as such and not always effective for light. Inspection often revealed dirty —sometimes moldy—walls, peeling paper, scaling paint, and falling plaster. Altho the women frequently complained about the dirt and unsightliness, they accepted the situation either because they had no time or money to remedy it or because, as they frankly stated, other things had to come first.

Temperature.—Most of the homemakers interviewed gave little thought to temperature of the washroom. Industrial research,[15,18] however, has revealed that workers achieve best results in rooms with constant temperatures of 50° to 61° F., low humidity, and constant movement of air.

On summer visits the field workers found that many of the porches and washhouses were exposed to the sun without any shade, and were uncomfortably hot by 8 o'clock in the morning.

In winter a few of the porches are glassed-in or canvassed-in to break the wind. Field workers, however, found most porches too drafty and too cold for comfort or for efficient work. All porches were inconvenient, too, without water or drains. The smaller washrooms, when water was heated in them, were too hot in summer, altho scarcely warm enough in winter.

Heating.—Only 52 percent of the women have washrooms that are adequately heated (Table 12); 48 percent must therefore wear heavy clothing while washing during the winter months. Because of the danger of exposure or the lack of heat in the laundry or both, 20 percent change washrooms during the coldest months of the year. But 15 percent of the outside washrooms that are used thruout the winter have actually no heat even in the coldest weather. While doing the washing, the women wear galoshes, winter coats, sweaters, scarfs, and hoods. Even so-dressed, they are in danger of exposure, to say nothing of the inconvenience of working in bulky clothing.

TABLE 12.—SOURCES OF HEAT IN WASHROOMS

Room-heating facilities	Entire group	Observed group	Water-heating facilities	Entire group	Observed group
	perct.	*perct.*		*perct.*	*perct.*
Coal range or furnace in washroom	52	27	In laundry	28	24
Coal range or furnace in adjoining room	26	33	Kitchen range	49	38
Gas or kerosene range in washroom	7	3	Iron kettle	6	5
Iron kettle in washroom	1	3	Piped hot water	22	24
Combination	0	32	Combination	0[a]	8
None	15	3			

[a]The women of the entire group who used more than one kind of water heater to speed up the washing listed both kinds. Data were not tabulated separately as in the group observed.

Water supply. As shown by the table below, the majority of women who cooperated in the survey have soft water.

	Soft water percent	*Hard water percent*	
Whole group	75	25	(72 percent of these use softener)
Observed group	75	25	

While the majority have rain water, there is rarely enough of it for all washing purposes. Clarifying and deodorizing it is so serious a problem for these women that many have requested help in solving it. Having tried various methods without success, they reported going "back to hard water rather than put the clothes in that dirty, smelly rain water."

A few complaints were made about iron stains from hard water. Some women described the hard water as being "as rusty and dark-looking as cistern water." But the major complaint about hard water was the difficulty of getting active suds.

Shortages of water often cause real hardships in Illinois farm homes. In Shelby county, for instance, some families periodically buy water for all purposes and truck it to the farm. Such crucial shortages occur about every four years. In other counties less seriously affected, homemakers let washings accumulate 4 to 6 weeks when they do not have enough water to wash oftener.

In normal times, however, 47 percent use soft water for the entire washing; 28 percent use it for suds only, and 25 percent use hard water for the entire washing (28 percent of these use a softener).

Source of water supply. Most of the water is pumped (Table 13), and many of the pumps are outdoors. In the interviewed group only 23 percent have running water. Not all indoor pumps and faucets

TABLE 13.—SOURCE OF WATER SUPPLY

	Hand pump in dwelling	Hand pump outdoors	Faucets	Pump and faucet
	perct.	*perct.*	*perct.*	*perct.*
Entire group	40	36	20	3
Observed group	38	11	40	11

are in the room where the washing is done or where the water is heated. Only 8 percent of the faucets are over tubs. Thus most of the women have to lift and carry the water and many of them also have to pump it.

Water heating.—Altho 22 percent of the entire group have piped hot water (Table 12), only 19 percent have it piped into the washroom; 28 percent heat the water in the laundry room; 49 percent heat it on the kitchen range[1]—the only available stove; and 6 percent still use the large open iron kettle outdoors.[2]

In most homes laundry stoves and water containers are inadequate —either or both often makeshifts. Not all the stoves are the right size or shape to hold washboilers (first choice of container for size and shape) or metal tubs (second choice for size). Some women do not have wash boilers or enough tubs and have to heat the water in several large cooking utensils.

Of the few who still use the open iron kettle, some prefer it, but most use it because it is their only suitable container. Those who prefer it gave the following reasons: (1) an iron kettle is large enough to hold plenty of water for the entire washing; (2) water heats in less time in an iron kettle than in any other container; (3) heating the water outdoors in an iron kettle keeps the steam and the "mess" out of the house; (4) the same kind and amount of fuel as would be used in a laundry stove can be used under the kettle and does not have to be carried so far; (5) using the outdoor kettle keeps the heat and steam of washing out of the house (this is important in summer).

Some women whose washhouses are too small for a laundry stove have found that a butchering kettle, especially if jacketed and set up permanently, is better for heating a large quantity of water than is the kitchen range. Use of a butchering kettle also does away with the need for extra containers and for extra space in which to store them.

[1]Only 24.9 percent of the women interviewed and 8.2 percent of those whose washings were observed wash in the kitchen.

[2]Some of these women use more than one kind of water heater in order to speed up the washing.

No matter where water is heated or in what kind of container, the type of fuel used to heat it in summer adds another burden to washday. Corncobs and chips, being inexpensive and plentiful, are the most popular fuels. They make flashy fires that heat up rapidly and die out quickly—that must be watched closely and fed often. Large supplies of these lightweight fuels are necessary; this means much carrying, much feeding, and many interruptions to the washing.

In winter the problem is simpler because fuel for other purposes can be used to heat the wash water. The steadier fuels (wood and coal) that are used in winter reduce the amount of carrying and feeding. When the water is heated on the kitchen stove, the fuel that heats it also cooks the meals and heats parts of the house. Some women reported, however, that when the kitchen stove is used, allowance must be made for slower heat. This means that they must get up earlier than usual or begin the washing at a later hour (early rising on the farm is a summer habit rather than a winter one). No matter what the fuel, most of the group lay the fires and fill the heating containers the night before washday, partly to keep from carrying all the wash water in one day and partly to get an earlier start with the washing.

Drains.—While 46 percent of the whole group and 60 percent of the observed group have floor or sink drains (Table 14) in which to empty the wash water, 39 percent of the drains reported and 54 percent of those seen by the field workers are not in the washroom. Many of the women, therefore, who empty water into drains have to carry it from the washroom to the drain. Those who have no drains have to carry out all the wash water and empty it on the ground, the distances ranging from 6 to 100 feet (average 31 feet).

The majority (90 percent) have drains in washer or tub or both, but only 32 percent can use them to the best advantage. The others, having no outlets near the washing equipment, have to carry the water after draining it from washer or tub.

TABLE 14.—DISPOSAL OF WASTE WATER

Type of drain	Entire group	Observed group	Location of drain	Entire group	Observed group	No drain	Entire group	Observed group
	perct.	*perct.*		*perct.*	*perct.*		*perct.*	*perct.*
Floor drain..	34	30	Inside washroom..	[a]	50	Water poured		
Sink drain...	12	30	Outside washroom	39	54	outside.....	54	40

[a]No data.

TABLE 15.—FARM HOMES IN WHICH WATER FOR WASHING HAD TO BE CARRIED, AND DISTANCE CARRIED

	Percent	Distance carried		Percent carried by homemaker		Percent carried by other than homemaker
		Range	Average	Without help	With help	
		feet	*feet*			
Entire group	83	3-330	25	28	0	72
Observed group	78	1- 70	14	31	0	69

The actual distance water is carried for disposal during each washing is many times this figure (31 feet), depending on the size of the wash and the amount of water considered sufficient to get the clothes clean and free from soap.

A test made for this study showed that the average amount of water for each tub is five buckets. Five (buckets per tub) times 3 (washer and 2 rinse tubs) times 31 (distance from washing equipment to drain) equals 465 feet. Each suds and 2 rinses require an average of 15 buckets of water—15 trips of 31 feet each. To understand the amount of work it takes simply to dispose of the wash water, one must remember, too, that the standard bucket of water weighs 18 to 20 pounds.

Who carries the water. Carrying the water is the biggest and hardest job of the laundry in most farm homes. In most of the homes surveyed all the water for the washing had to be carried. The average distance for the whole group was 25 feet; for the observed group it was 14 feet (Table 15).

The homemakers themselves do most of the carrying. Often they have help with the initial setup, various members of the family carrying the water for heating; but as the men go off to the fields and barns and the older children go to school, the homemakers must carry all the water for changes, additions, and disposal thruout the laundering processes and the cleanup.

Twenty-eight percent of the women interviewed and 31 percent of those observed do not have any help with the carrying.

Interruptions—Cooking and Telephone Calls

Cooking. For all washing done outside the kitchen, the distance from the kitchen range to the washing equipment is important, especially if the homemaker is doing any extra cooking or has to prepare dinner before the washing is completed. Where laundry stoves are

large enough and otherwise adaptable to cooking, some women cook the washday meals on them to save steps and fuel. Some women who cannot manage this way because of lack of suitable equipment either prepare enough food the day before washday to carry over with little cooking or cook a one-dish meal that can be finished with little supervision.

Many of the women who have to cook dinner before finishing the washing reported a preference for dividing the washing—that is, for doing part in the morning and part in the afternoon, with a two-hour intermission for the preparation of the noon meal and for the dishwashing. As actually worked out in observed procedures, household linens and unstarched white clothes usually were washed, rinsed, and hung up in the morning, while colored clothes, overalls, and clothes worn for dirty work in house or barn were held over for the afternoon. Wherever washings were too large to be completed in the morning, all starching and hanging of colored clothes were left till afternoon.

Time arrangements usually depend on size of washing, time of starting, and available equipment. Many women whose washings are small enough to be completed by noon do not have enough clothesline to hang up all the clothes at one time. While waiting for clothes to dry, they prepare and serve dinner and then continue washing in the afternoon.

Telephone interruptions. Telephones in the homes inspected were not in the rooms where the washing was done but were 10 to 60 feet away, 28 percent being up a flight of stairs. The distance of the telephone from the laundry may add a great deal of strain to washday. If incoming calls are related to the husband's business and the homemaker takes care of the business in his absence, she must be able to hear the telephone and get to it quickly.

There are great individual differences in the way women regard telephone interruptions. A few like a "visit to relieve the monotony of washing," but most find answering the telephone disturbing, as they must stop their work, dry their hands, and sometimes wipe their shoes. Some women, knowing that they cannot hear the ring when hanging out clothes in the yard or attic, pay little attention even when close enough to hear it. Others strain to hear all calls when in the laundry because of missing calls while hanging up the clothes.

These women are on party lines, and each hears all the rings on her line. According to their statements, they are so used to hearing different rings that they have no trouble recognizing their own even when busy with the washing.

During observed washings there were surprisingly few calls. Monday morning was said to bring the fewest calls of the week (except where there were business calls) because "everybody else is busy washing too and has no time to telephone."

Drying Facilities

Drying clothes in winter. Eighteen percent of the women of the whole group hang clothes out all winter (Table 16). Some do so from preference, but most do so because they have no indoor drying space. While all the rest dry clothes indoors, only 33 percent have drying space apart from living quarters. The others have to use whatever

TABLE 16.—PLACES USED FOR DRYING CLOTHES

Winter	Entire group	Observed group	Summer	Observed group
	perct.	*perct.*		*perct.*
Basement	23	56	Back yard	61
Kitchen	16	17	Side yard	24
Living room	14	4	Chicken yard	6
Attic or storeroom	1	4	Pastures	3
Bedroom	19	4	Combination	6
Washroom	9	4		
Dining room	11	4		
Outdoors	18	8		

NOTE—In winter the women who did not have any room large enough for the complete wash used several rooms for drying the clothes. Data on drying clothes in summer were not obtained from this group.

space is available in kitchens, dining rooms, bedrooms, and living rooms. They put hooks in walls and stretch lines across the room or improvise racks from chairs and other furniture. A few have collapsible racks which they store in closets and bring out on washday to set up around stoves and registers.

Drying clothes in summer. While all homemakers dry clothes outside in summer, many do not have the kind of drying space or equipment which permits them to work either efficiently or easily. On most of these farms space for drying clothes has not been planned for, and it is seldom possible to have enough clotheslines in sun and shade near the washing center without interfering with free access to the water supply—well or cistern—and to doors of the house and other buildings.

Many of the women whose washings were observed by the field workers had no suitable drying yard. Many, having their clotheslines too far from the washing center, had to carry the clothes long distances

to hang them up. Where the clotheslines were not stretched above grass plots, they had to walk thru dewy weed patches and dirty, sometimes muddy, yards. Some had no shade in which to dry the colored clothes. In some yards, too, odors from pigpens and manure piles made hanging up the clothes a distinctly unpleasant chore. Dust from roads and fields, and ground litter of fowls that ran about the drying space and roosted on fences and in trees caused needless accidents to the washing and made more work for the homemaker.

In 43 percent of the homes where washings were observed, clotheslines were not long enough, were poorly spaced, and were supported on too few hooks to keep them taut.

Tenants who are dependent on landlords have to use whatever drying equipment is provided and wait for repairs. Even when adequate equipment is provided, there is the problem of getting it set for use. Putting up clothesline posts with arms and hooks is a little too hard for the average woman to manage alone. Unless the man of the family recognizes the problem and works out a satisfactory solution, inefficient drying arrangements are the rule, even in homes of owners.

It is difficult, too, to keep equipment repaired. Since the outdoor drying period coincides with the busy season on the farm, the men seldom feel that they have time to help. The women use what ingenuity and ability they have, but lacking strength, proper equipment, and tools, they cannot put up satisfactory clotheslines or even repair them. The improvised lines are often so insecure that they cause needless hardships and accidents.

Because they do not have clotheslines long enough to dry all the clothes at one time, 47 percent of the women in the observed group have to wait for one batch of clothes to dry before hanging out the next batch. This delay makes the washing last thruout a full day—and sometimes longer for large washings—when it actually could be completed in a single morning if all clothes could be hung up at the same time.

Height of the clothesline. A frequent complaint was that clotheslines were not the right height. Indoor clotheslines in rooms that are lived in have to be high so that the women can move about doing the other work. They stand on boxes, benches, or stools to hang up the clothes, but this means extra carrying and also some danger of falling either while working or while climbing up and down.

On 50 percent of the farms where washings were observed, outdoor clotheslines also were too high. Some of them were badly located in the first place; some were put up for earlier tenants, and altho

possibly right for them, are not right for the women who now use them. This situation tho often recognized is seldom remedied.

Another reason for the height of outdoor clotheslines is that they are often stretched from trees and buildings instead of from properly spaced posts. Hooks to which clotheslines are attached are placed too high on these makeshift supports, possibly to counteract sagging where there are long stretches of line and a scarcity of poles or props.

Summary of Washroom Conditions

Altho only 251 washrooms were visited, a comparison of 318 was possible from fairly complete descriptions covering conditions in 25 kitchens, 105 basements, 47 utility rooms, 59 porches, and 82 outside buildings used as washrooms. Rated in terms of modern conveniences (heat, water supply, and drain facilities—see rating scale below) basements consistently ranked first; kitchens, second; outbuildings, third; and porches, fourth.

Rating Scale Used in Judging Washrooms

Excellent—Adequate source of heat in washroom
—Hot and cold water piped in washroom*
—Floor drain in washroom*
Good—Any two conveniences listed for excellent
Fair —Any one convenience listed for excellent
Poor—None of the three conveniences listed for excellent

(*If water had to be carried, it was not counted as a convenience.)

Basements are best for size, being the largest and the least crowded with other equipment (usually containing only the heating facilities and the fruit shelves). They are best, too, for artificial light, 88 percent of them having electric lights whereas only 50 percent of all other washrooms have electric lights.

Porches are the smallest of all washrooms but rank with outside buildings as best for daylight. Seventy-eight percent of those who wash on porches and 73 percent of those who use outside buildings "never use artificial light."

As for color and condition of walls, kitchens and porches are best; outside buildings, the poorest.

Less than one-fourth of the 411 homes visited have basements. Homes with basements evidently represent the better farms and, as is indicated by the figures, include some modern conveniences.

So-called basements on some other farms were, when inspected, found to be old root or fruit cellars. Some of them, where there is central heat, house furnaces. Some are large enough and light enough to be used as laundries, but most make very depressing washrooms.

Kitchens, altho rated as the second-best washrooms, are used by only one-fourth of the whole group. This means that half the group wash in the rooms with the poorest rating.

Most of the group who wash on porches or in outside buildings during the winter months do so because these are the only available washrooms. A small number, however, who have kitchens large enough to accommodate washing equipment and laundry activities prefer to use their regular washrooms all winter in spite of the hardships and inconveniences of washing outside. The following reasons which these women gave for choosing to work outside indicate for the most part their pride in their kitchens: "To keep the mess out of the house," to save wear and tear on new linoleum or "nice" kitchen equipment (recently acquired after long saving), or to keep from marring freshly waxed floors.

While the reasons most frequently given for washing outside concern keeping the dirt and disorder out of the kitchen, many women object to storing the washer in the kitchen during the winter months. Others use an outside washroom in order to leave all washing equipment set up ready for use and to avoid cleaning up as carefully after each washing as is necessary if washing is done in the kitchen. Some husbands as well as wives object to having the washing done in the kitchen because it interferes with the noon meal and other kitchen activities.

These women were asked also whether they considered their laundries uncomfortable or inconvenient and how they would improve them if they could have the conveniences they wanted. Eighty-three percent declared their washrooms inconvenient; 9 percent of these considered their rooms too unsuitable to be remodeled under any circumstances (only a new washroom would help).

Improvements desired by these women include an adequate water system, listed by 33 percent; heating facilities, 18 percent; and drains, 10 percent. Fourteen percent think their rooms could be improved by electricity, better light, and more space.

Only 9 percent mentioned benches, table space, tubs on wheels, and carts for baskets. When it is remembered that farm washrooms lack such equipment, this figure seems incredibly small. Apparently the

women have not worked with these simple conveniences and do not know how much time and energy they save.

Many of those who change washrooms during the winter months wish they could have a place that would be suitable thruout the year. Some wish they could have a room "just for washing and not for storing old farm machinery and tools," while others "would like to be able to keep the chickens and ducks out of the washroom." Smokehouses, according to others, while sometimes cleaner than the rooms they wash in "just aren't right for washing." Often in these improvised washrooms the water is a few steps up or down from the place where the washing is done. The majority of homemakers object to doing their washing in a room which has different floor levels no matter where the room is nor whether it is otherwise convenient.

The 251 washrooms visited by the field workers were rated as follows (*the figures are percentages*):

Light—Plenty, 57; medium, 31; dark, 13.
Cleanliness—Very clean, 28; medium, 52; dirty, 19; very dirty, .4.
Orderliness—Very orderly, 27; orderly, 47; disorderly, 25; very disorderly, .4.
Arrangement—Good, 36; fair, 46; poor, 18.
Conveniences—Good, 20; medium, 43; poor, 30; none, 6.

These 251 washrooms probably represent the better ones, but even so, discomfort and inconveniences are apparent. There are some differences between the ratings of the homemakers and those of the field workers. Accurate comparison is impossible; but obviously, even with a liberal rating scale, the field workers found the washrooms more inconvenient than the homemakers reported them to be.

Equipment

Washing machines. Power-driven machines are used by 96 percent of the whole group and all of the observed group. Only 2.2 percent reported "washing on the board." A few of the women interviewed still use hand-driven machines. (See Tables 7 and 8, pages 25-26.)

As for kind of machine used, 57 percent of the whole group own electric washers, 38 percent own gasoline-driven machines, and almost 2 percent use hand-driven machines. Seventy-eight percent of the women whose washings were observed own electric machines and 22 percent own gasoline machines. The agitator type of power machine is the most popular, being used by 95 percent.

Electric machines preferred.—Appreciation of power-driven machines was expressed frequently in interviews. Women who own elec-

tric machines repeatedly asserted that their most serious laundry problem was removed when electricity was introduced into their districts. All women living in these districts prefer electric washing machines. Those who can afford to have their gasoline machines rebuilt are having them equipped with electric motors for use until they can buy new electric machines.

Objections to gasoline-operated machines.—Most homemakers find washing with a gasoline machine very tiring. They complained that (1) the motor is hard to start, (2) the noise and vibration of the machine are wearing to the nerves, (3) heavy fumes from the exhaust are disagreeable, and (4) the outlet for the exhaust is usually in their way.

These women agreed also that it is very "wearing" to have to depend on the men for help, as they must do when washing with a gasoline machine. In order to have help with starting the motor, they begin washing before the men go to the barns and fields and then thruout the washing they "live in fear" of stalling the motor. The needless interruptions, the necessity of leaving work to find the men, who are often at a considerable distance from the house, and their reluctance to disturb the men at work all add worry and extra fatigue to the other hardships of washing.

The women's complaints about the noise and vibration of their machines are recognized as being largely subjective. They referred to the "whacking sounds" and "the peculiar, irregular vibrations" which give them a sense of "hurry all the time"—a feeling that they must "keep up with the machine." Strangely enough, identical words were used repeatedly in these references to sound and vibration.

Locating the outlet for the exhaust causes considerable trouble and concern. If put thru a window or a door, it cools the room too much in winter. In some washrooms permanent outlets have been made thru ashpans or chimneys, thru holes in the wall, window sashes, or doors, but such arrangements are inconvenient, for the exhaust pipe is usually in the way. This means that the worker must climb over it or go around it.

Homemakers who own gasoline-operated machines declared that they "live in constant dread of breakdowns until the washing is completed." As there is no house-to-house commercial servicing of farm machinery, breakdowns are more serious on farms than in town. Repairs must be made by members of the family, or the washer must be taken into town to be serviced. Sometimes the men cannot afford to take time out either to repair the machine or to haul it to town.

Even when there is no rush of other work, repairs cannot always be made at home, as the necessary parts and tools may not be available on the farm, and also not many farmers are skilled in repairing washing machines.

It is easy to see that breakdowns hold up the work and cause considerable anxiety and irritation. Wringers and drains, too, are troublesome. Wringers break down and drains clog too easily or are too small for rapid flow.

Tubs. *Stationary tubs* are used by only 3 percent. *Square metal tubs* are used by 40 percent of the whole group and 50 percent of the observed group. These tubs have drains and are supported in single or double frames with castors; they are easily handled with little loss of water but have to be filled by bucket or hose and emptied in the same way if there is no floor drain in the washroom.

Single round galvanized tubs without drains are used by 59 percent of the whole group and 39 percent of the observed group. These tubs are satisfactory for size and weight, but they have no supports, and they must be filled by bucket or hose and emptied by dipping the water and carrying it to the drain or outside.

The women whose washings were observed used various improvised supports for tubs: 25 percent used wooden boxes; 20 percent, benches; 8 percent, old chairs with the backs removed; 6 percent, kitchen chairs, and 8 percent, stools. Discarded chairs and tables were used to advantage where an attempt was made to have supports the right height for the homemaker. The heights of kitchen chairs and stools could not be changed because they were used for other activities.

Makeshift supports were usually of several heights, making arrangement difficult and the work harder as well as causing loss of water and "messy floors." Often, too, the supports were unsteady and this definitely added to the fatigue of washing. Where the legs of tables, benches, and chairs were loose or uneven, the strain on the women was obvious.

The problem of height is one which manufacturers have only recently recognized. The jacketed twin model tubs with frames, while helpful because of having steady supports and adequate working surface, are without exception too low—possibly because they were designed to be used as tables between washings. The new lightweight, galvanized tubs and frames, both twin and single, are 4 inches higher than the older tubs, but not one of these was found in the 411 homes visited, nor in any homes where washings were observed.

All commercial frames used by these women were reported to have

castors; but under conditions frequently found in the homes visited, castors are not as useful as designed to be. Where floors are soft, broken, or uneven, castors unless blocked make washing equipment unsteady. Neither are they very useful where there is a step up or down to the sink drain or floor drain, or where doorways are too small for frames and tubs to be pushed thru. As filled tubs are heavy and difficult to manage without "slopping water on the floor," many women prefer to fill the tubs by bucket rather than undergo the strain of trying to roll the heavy equipment over the floor. Washrooms being what they are in farm homes today, castors are used mainly in getting the washing equipment out and in storing it after use.

All these tubs are equipped with drains; but drains, like the castors, are not always used. They are of greatest value where tubs can be emptied directly into a floor drain. Where there is no floor drain, it is necessary to carry the water for disposal, whether it is drained out or dipped out of the tub.

Many women reported that they prefer to rest the bucket on the side of the tub and dip the water out rather than stand and wait for it to drain out and then stoop to lift the bucket. Also women who use the drains complained that they clog badly, buttons and buckles being listed as more troublesome than lint and threads.

Arrangement of equipment. Ninety-four percent of the whole group and 78 percent of the observed group showed a preference for having washer and tubs in the center of the working space wherever possible and with room for free movement around them. Tubs are set against the wall when such an arrangement makes for best use of available space or light or both. The working space in most washrooms is so small that there is little choice of arrangement. The location of equipment varies, therefore, according to size and kind of washroom and kind of facilities. In basements it is especially necessary to have equipment near light; in kitchens accessibility to sink and stove is important; and in outdoor washrooms the position of the outside door must be considered as getting the clothes and water in and out is one of the major problems of washing in an outside washroom which does not have piped water, drains, and heating facilities.

Management

Washday responsibilities. While the entire group block the work of washing and obviously plan a reduced schedule for washday, there are certain housekeeping chores, such as planning and preparing the three regular meals, washing the dishes, making the beds, tidying

the house, and getting the children ready for school, that must be done even on washday. If the mother is responsible for driving the children to school and calling for them in the afternoon, she must either start the washing late or be interrupted. Young children have to be washed, dressed, and supervised as usual, and if there are aged or invalided members of the family, they must be provided for.

All studies show that the composition of the family affects the housewife's use of time and energy: the younger the children the more time she must devote to the care of her family. Illness, invalidism, and the presence of old people whose care must be added to the housewife's schedule also increase the amount of time required for family care.

One study[15] of farm homes in which there was little available help showed the average working hours of homemakers to be 74 a week in homes where the youngest child was less than 1 year old. Another study[22] found the total working time to be 73 hours a week where there was a baby under one year, and 66 hours where there were very young children. The time going into child care ranged from 21 hours a week in homes with a child under 1 year to 1½ hours a week where the children were 10 to 14 years of age.

Certain outside duties also take up as much time on washdays as on other days. Chickens have to be fed and baby chicks cared for as usual. If the homemaker has a special hobby, such as the raising of turkeys or geese, she cannot neglect their daily care. Gathering of the vegetables. berries, or other fruits for the day's meals is part of the morning's work and must be sandwiched into the laundry schedule unless it can be assigned to some other member of the family.

A survey[15] of 559 homes reported in 1932 showed that 9.6 hours of the homemaker's week goes into farm and outside work. Another survey[22] of 228 Oregon farm homes reported in 1929 showed the average time spent by the homemaker on farm and outside work to be 12.2 hours a week. These studies bring out the differences between rural and urban homemaking requirements and also the difference in length of working day in farm and city homes. The average work week in rural homes is 61.2 hours and in urban homes 47.3 hours (see pages 27 and 28 of President's Conference[15]).

In the Illinois survey figures on the amount of outside work done by these homemakers were obtained from only 207 of them. These records show that 52 percent are responsible for all the work of raising chickens, including cleaning the hen houses and brooders; 14 percent assist other members of the family with this work; 32 percent have full

responsibility for the vegetable gardening; 29 percent assist with gardening; and 11 percent do the regular milking. A small number are responsible for mowing the lawn, and a few always run the tractor during busiest seasons. Nine percent regularly assist with outside chores.

Washing is really an extra job added to the regular day's work. Since only a few of the daily chores can be lightened to make time for this block of work, the homemaker usually so plans her work for washday that there is less cooking and baking, no dusting or cleaning, no sewing or mending, and no company and recreation.

No amount of management, however, can solve all the washday problems, as the homemaker is usually responsible for acting upon all emergencies, and washday sometimes provides a whole chapter of accidents. If the cows get out, if neighbors come or telephone for information or to borrow implements or machinery, if anything goes wrong either with the livestock or with the members of the family, the homemaker must leave her washing and attend to matters if possible; if unable to cope with things alone she must go to the fields to find the men. Such responsibility is accepted by the homemaker and her family as being part of her job washdays and other days, but it definitely adds to the fatigue of washing.

Many homemakers also do extra scrubbing on washday in order to use water that has been pumped, carried, and heated for the washing. Thus they save water, work, and fuel. In the observed group, 52 percent regularly work this extra cleaning into the washday schedule, 40 percent scrubbing the porches, 30 percent the kitchen, 20 percent the utility room, 20 percent the brooder house, 10 percent the outside toilets, and 10 percent the walks.

Attitudes Toward Laundering

An attempt was made to determine the attitude of these farm women toward washing. Answers to the direct question (Table 17) would indicate that 339 (82 percent) actually like to wash or "do not mind" doing it and that only 66 (16 percent) dislike, "dread," or "hate" the job. The percent of those who like to wash seems surprisingly high when it is remembered that these women put up with great hardships and inconveniences. The same women, however, revealed a somewhat different attitude—perhaps their true feeling—when they were talking with field workers. The following comments are taken from notes on their conversations: It is always good to have the washing finished. . . . I like washing behind me. . . . When the washing is done, a heavy load is off. . . . Washing is such a big job. . . . Washing disrupts

TABLE 17.—COMPARABLE CONVENIENCE OF WASHING FACILITIES OF HOMEMAKERS WHO LIKE TO WASH, DO NOT MIND, AND DISLIKE TO DO IT: ENTIRE GROUP

	Facilities of 205 who like to wash	Facilities of 134 who do not mind washing	Facilities of 66 who dislike washing
Place washing is done			
	perct.	*perct.*	*perct.*
Kitchen	23	22	26
Basement	28	24	24
Utility room	8	11	14
Porch	13	19	18
Outside building	22	21	14
Other places	6	3	4
How tubs are filled and emptied			
Water carried to tubs	85	79	85
Water carried from tubs	76	83	95
Dipped in pail	16	23	22
Drained into pail	57	55	67
Carried in tub	3	5	6
Final disposal of water			
Floor drain	35	35	26
Sink drain	15	10	5
Poured on ground outside	50	55	69
Average distance water is carried			
	feet	*feet*	*feet*
From source	16	14	21
To disposal point	15	15	19

the whole house. . . . It is hard to get at. . . . I put it off whenever I can. . . . It is finding the time to do it that is so hard.

It is apparent that most of these women are relieved when the washing is over whether they like or dislike the actual work.

Altho there was good rapport between the interviewers and the homemakers, the homemakers spoke conservatively and their conversation revealed the family loyalty said to be characteristic of the farm group. They were much freer in discussing their likes than their dislikes. The figures for dislikes run higher therefore for women who were visited more than once, as it generally takes more than one visit to get these women to discuss their dislikes. It is possible that they consider it disloyal to their husbands or critical of them to admit that they dislike anything that has to be done about the house, or that poor equipment and inconveniences cause them concern. Perhaps, too, they were restrained by sportsmanship and pride.

At times it was obvious that this discussion was not welcome, and the matter was dropped immediately. Figures are therefore incom-

plete and inaccurate, but even so they are interesting in that they show certain definite trends in attitude and response.

Facilities of those who like washing, those who do not mind it, and those who dislike it are shown in Table 17. Altho differences are not so great as might be expected, the women who like to wash have the most conveniences. A larger proportion of those who dislike to wash have to carry water for disposal and also have slightly longer carries both from the source and for disposal; fewer have floor or sink drains, and more have to empty the wash water outdoors.

The 339 women who like washing or do not mind it seem to get considerable satisfaction from the work. Pride in clean, white, soft clothes and pleasure in the good clean smell of them, listed by 92 women, outranked all other reasons for liking to wash or at least not minding it. The next most frequent reason, given by 39 women, had to do with new modern equipment. It was obvious that the contrast between washing the old way and washing with their newly acquired modern equipment had caused these women to lose sight of the labor involved in washing.

Most of the other reasons given for liking to wash are related to the type of work. They show that washing is liked because it is a definite job, because it stands out as a unit, because accomplishment can be recognized and has value, and lastly because it requires action.

Others like being out of doors, washing on the porch or hanging out clothes. Thirteen admitted liking to play or dabble in the water and soapsuds. Five women, who make a family affair of the washing, attributed their liking to companionship.

Seventeen women were inclined to be matter of fact about it saying that since it is a job that has to be done, they may as well enjoy it. Thirty-eight had not even thought about whether they liked it.

Of the 66 women who admitted disliking to wash, 38 attributed their dislike to lack of modern conveniences; 29, to the fact that washing is hard work; and 18, to the fact that it is a "messy" job. Only 15 listed ill health as interfering with efficiency and enjoyment of washing, altho 75 homemakers reported serious physical disabilities (36 of these women like to wash and 24 do not mind doing it). Ten admitted having too much to do and thus finding laundry an extra job, hard to fit into their schedules. Another 10 said they dislike to touch dirty clothes or have them around for washing, objecting particularly to the coarse, heavy barn clothes. Odor was also referred to as objectionable. Four homemakers indicated their dislike for every-

thing about washing; 3 said they prefer outdoor work to any housework, including washing.

Only 6 women admitted being all tired out with chores, breakfast, and getting the men off to work and the children off to school before starting the washing. Most of the other women have the same work program as these 6; yet they made no complaints and when questioned and encouraged to admit fatigue they not only denied it but also insisted that these activities are all in the day's work and to be accepted accordingly.

Help with washing. The amount and kind of help a homemaker has with the washing may have something to do with whether she likes it. Seventy-two percent of those who said they like to wash or do not mind it have help. Only 59 percent of those who indicated dislike for washing have any help. Help, of course, lessens the homemaker's work; but, as was repeatedly brought out by interviews, the companionship while working contributes more to the homemaker's attitude toward the job than does the actual reduction of work.

While 30 percent have no help of any kind at any time, and only 4 percent have help with the entire washing, 66 percent have some help from the men. This help varies from lighting the fire (laid the night before), filling the boiler, and starting the machine, to carrying all the water for heating and for the rinses if cold water is to be used, emptying the wash water, carrying heavy baskets of wet clothes to the line, hanging up clothes and cleaning up the washroom. The amount of help depends somewhat on the amount of time the husband can spare from the field work.

Altho 72 percent of the women have some help with the hardest part of the washing—that is, with the pumping and carrying of the water—this help usually is with the initial setup only and does not include all the pumping and carrying for the washing. The water after being heated must be carried to fill the washer, and to fill the rinse tubs too if a hot rinse is used. Then more water must be heated for the second suds, or for replenishing the original if the suds is not changed, and sometimes for new rinses. When washings are large and standards high, the rinse water has to be changed whether hot or cold water is used. Whether heated or not, it has to be pumped and carried.

In 62 percent of these homes the husband helps pump and carry the water to begin the washing as he is usually the only person with the strength and the ability to do so. In 3 percent of the homes such help is hired. In the other homes it is given by elderly men—grand-

fathers and uncles residing with the family—or sometimes by a daughter-in-law who lives in the home and who, being younger than the homemaker, assumes the hardest part of the washing.

Some men recognize that farm washings are hard work for women and regularly take on the heavy part. Some definitely plan their work so as to be near the house and available for the heavy lifting thruout the washing. This is possible only in the dull season—the winter months when washings are smallest—but even so it is a big help because of the greater hardships and exposure of washing in winter. Another 3 percent, finding it impossible to be available on call, empty the washer and the rinse tubs, and clean up the washroom at the end of the day. This also saves the homemaker's strength, but it is not always convenient for her to leave this work till the husband comes, as the equipment or "mess" often interferes with her other work.

The help given by the children is most often with the hanging up of the clothes, as this work is not too hard for them. They can do it without supervision—often even for homemakers who are particular about the way clothes are put on the line. Some children take pride in hanging the clothes as they have been taught to do. Thus they free the homemaker to concentrate on the washing processes proper. Having someone else to hang up the clothes is especially helpful to a homemaker who does not have line enough to dry all the clothes at one time, as it is thus easier to get the first batch of clothes dried and down to give room for the rest of the washing. This is true, of course, only in summer, as clothes dry slowly in winter and also the children cannot help because of school.

Some women have very welcome help—not with the washing—but with other work. The children, before leaving for school or work, make the beds, wash the dishes, put the house in order, get breakfast, or prepare the vegetables for dinner. This kind of help lightens the load for the homemaker and often she prefers it to help with the washing, as she feels less strained if she can concentrate on one task at a time and does not have to manage the washing and all the other household responsibilities at the same time or even think about them as still to be done.

Interruptions, such as telephone calls, supervision of young children, and watching the cooking, cause considerable concern. Elderly persons or semi-invalids unable to help with the heavier work can, and often do, reduce these interruptions for the homemaker. By being useful they improve their status in the family and thus help also to improve family relationships.

Family cooperation. The fact that other members of the family help the homemaker with the laundry indicates that they recognize the difficulties of the job. But more important than this, it shows the cooperative spirit of the farm families. Just how conscious individuals are of their share in soiling the clothes and therefore their responsibility for getting them clean could scarcely be determined in this survey. It was revealed, however, that in most homes there is some discussion of a "fair amount" of clean clothing per week, of care of towels and responsibility for dirt in them, of whether it is fair to wipe hands on overalls and use handkerchiefs for dusting off automobiles and farm machinery and for cleaning out or wiping up oil, grease, and dirt. Even young children seemed aware of the problem of keeping towels, doormats, and play clothes clean.

It is true that some homemakers complained that the men are not careful enough with their clothes and could help more to reduce the washing load, and a few complained of the opposite type—the men who make washings harder by neglecting to change barn clothes and socks often enough. But there was, on the whole, evidence of good sportsmanship on both sides.

Altho no specific questions were asked concerning family cooperation, conversation and discussion indicated that the farmer and his wife have a cooperative and appreciative attitude toward each other's problems. Interviews in the homes surveyed invariably revealed a fine companionship and a sharing of experiences. The husband and wife live so intimately and work so closely as a unit that their common goal, earning a living and making a go of the homemaking, seems to be apparent to both of them and even to the children, who are usually happy because of the home atmosphere.

Hard work, steady grind, inconveniences, and the "elements" are all accepted in the day's work, and there is little fretting about what cannot be changed. Most of these homemakers are challenged and not discouraged by their problems.

Many of the women in their turn also help the men with the outside work. They drive tractors or trucks and help with the milking, the fruit picking, or other farm labor during busy seasons. In interviews they often mentioned the companionship of working with the men, the challenge (more often stated as "the test of their ability") and the stimulation of working outside with machinery. It was evident, too, that part of their enjoyment of outside work sprang from their interest in nature and the soil, as they frequently mentioned space, scenery, sky, sunshine, and crops, and often expressed love for "live

things," especially small animals. Their pride in crop yields and their knowledge of farm and field problems, solutions, and attempts at solutions suggest that they follow the outside activities closely and share in them. They are not afraid of hard work and not ashamed to do any work that is necessary. Being situated as they are, their willingness to accept anything that comes up as being part of the job is very important for their mental health.

LAUNDRY PRACTICES

Entire Group

Soaking. Fifty-eight percent of the 411 homemakers in this survey indicated that they soak their clothes regularly before washing them. Some soak all the clothes; others only part, usually the dish towels and the very soiled underwear and work clothing. A few soak clothes only part of the time, usually in summer when they are more soiled. The greatest number, 55 percent, use warm water, while 39 percent use cold, and 7 percent prefer lukewarm. A large majority, 83 percent, of those who soak clothes leave them in the water less than one hour, commonly 15 to 20 minutes; only 16 percent leave them in overnight.

Bleaching. Eighty-five percent use bleach: 48 percent of these use it in the soak water, 12 percent use it in boiling, 5 percent in the rinse water, and 3 percent in the suds.

Boiling. Fifty-nine percent no longer boil any of the clothes; 23 percent boil all white clothes and 14 percent boil part of them, usually the towels, tea towels, and underwear.

Sudsing. The majority of these women, 75 percent, use soft water for the suds. Of those using hard water only 3 percent have automatic softeners; 25 percent use some kind of powder to soften the water, including 7 percent who use trisodium phosphate. Many use lye for breaking the water. Forty-seven percent begin the washing with very hot water (too hot to be comfortable for the hands); 41 percent start with medium hot water, 7 percent have suds water boiling hot, and 5 percent use only warm water. Homemade soap is used by 39 percent of the women—a larger group than listed any brand of commercial soap.

Only 9 percent use a second suds: 63 percent of these have the second suds very hot; 17 percent use medium hot water, 13 percent use boiling water, and 7 percent use warm water.

Rinsing. Eighty-five percent of the women use two rinses; the others use only one. Forty-seven percent use soft water for rinsing.

Where there is not enough soft water for the entire washing, 53 percent use the soft water for rinsing and break the hard water for suds.

For the first rinse, 43 percent use cold water; 31 percent, warm; 14 percent, medium hot; 4 percent, cold in summer but warm in winter; 1 percent, very hot; 1 percent, lukewarm, and .3 percent use boiling water. For the second rinse, 53 percent use cold water; 22 percent, warm; 3 percent, cold in summer but warm in winter; 3 percent, lukewarm; and 1 percent, medium hot water. It is interesting to note that 22 percent always use warm water for the second rinse in spite of the difficulty of heating it.

Bluing. A large majority, 77 percent, use bluing; 22 percent do not use it in any form at any time.

Starching. All the women of this group use starch, but amounts vary according to family tastes. There are great differences both in kind of clothing starched and in degree of stiffness desired for the starched clothes. Less starching is done in summer than in winter.

Hanging up clothes. All clothing is dried outdoors in summer. Even in winter 17 percent hang their entire washing outside. All others hang most of the clothes inside: 23 percent use the basement; 18 percent dry them upstairs in an attic or bedroom; 15 percent, in the kitchen; 14 percent, in the living room; 10 percent, in the dining room; 8 percent, in the washroom; and almost 1 percent, in the storeroom.

There is great variation in the way garments are hung up and also in the way they are grouped on the line. According to interviews, it seems that the women are more concerned about hanging the clothes straight so that the wrinkles will blow out and ironing will be easier than they are about so hanging them as to save wear on the clothes. In order to have neat lines of clothes, some women put like things together when rinsing and starching and some sort during the hanging-up process. Most, however, sort less now than formerly, taking the clothes as they come to save time and effort.

Observed Group

Soaking. Thirty-two percent of the 37 homemakers of this group said that they regularly soak all clothes before washing them; 51 percent, that they sometimes soak the whole washing and sometimes only part of it; 16 percent, that they never soak any of the clothes. Four percent use hot water, 69 percent use warm, and 13 percent use cold. Most women who soak the clothes now leave them in the water only a short time—69 percent, from 5 minutes to 1 hour; 4 percent,

1 to 2 hours—but 21 percent still soak them overnight. Only 4 percent vary the time of soaking according to convenience and amount and kind of dirt.

Bleaching. Only 48 percent use bleach. Of those using bleach, 55 percent put it in the soaking water, 27 percent use it in the boiling; 16 percent, in the suds; 11 percent, in the rinse; and 11 percent use it only for special stains.

Boiling. Fifty-six percent do no boiling; 40 percent boil towels only, and 2 percent boil all white clothes.

Sudsing. Seventy-five percent use soft water for suds. Twenty-two percent have no soft water. Of those who have only hard water, 5 percent have automatic softeners; all others use some kind of commercial softener.

Homemade soap is used by 33.3 percent. Of those who use bar soap (homemade or commercial) 45.7 percent dissolve it before placing it in the washer.

Forty-eight percent use very hot water; 54 percent, medium; 2 percent, warm; and 2 percent, lukewarm. The few (5 percent) who use a second suds have it very hot.

Rinsing. Eighty-six percent use 2 rinses. The others use only 1 rinse. None in this group uses 3 rinses. Forty-five percent use soft water, 45 percent use hard water, and 13 percent use soft water for the first rinse and hard for the second.

Of those using hard rinses, 40 percent have no soft water, 30 percent prefer hard water, 10 percent have to conserve soft water, 10 percent find it more convenient to use hard water, and 10 percent do not use the rain water because it is not clear. Thirteen percent use commercial softener in the hard water.

For the first rinse, 37 percent use medium hot water, 32 percent use warm, and 2 percent use very hot, while 16 percent use cold. It is of interest that 8 percent use warm water in winter and cold in summer. Warm rinses are obviously preferred.

For the second rinse the majority (45 percent) continue to use warm water, but 32 percent use cold.

Bluing. Forty-eight percent always use bluing and 2 percent sometimes use it. Seventy-two percent of the women who use bluing put it in the second rinse; 11 percent put it in both rinses.

Starching. All the women use starch. Since starched clothes must be ironed, it is surprising to note that some of these women starch

pillowcases, sheets, work shirts, and overalls. The articles which are regularly starched and the percentages of the observed group who starch them are shown in the table below.

	Percent		*Percent*
Dress shirts	63	Overalls	16
Cotton prints	61	Tablecloths	11
Work shirts	58	Sheets	5
Pillowcases	22		

Hanging up clothes. All this group dry the whole washing outdoors in summer, and even in winter 9 percent hang all clothes outdoors. Fifty-six percent use the basement; 17 percent, the kitchen; and 4 percent each, the dining room, the attic, the storerooms, the bedrooms, and the washhouse.

Summary of Laundry Practices

Time scheduling. Most of the women who contributed to this study have a regular washday and definitely prefer the first of the week, Monday being the most popular washday. There is, however, a growing tendency to wash on any day that is convenient. The forenoon is preferred for starting time, and washing weekly prevails over all other schedules.

Soaking. Despite the fact that most of these homemakers have a limited supply of water and also have great difficulty in getting water to washing equipment, over half soak all or part of the clothes regularly. Most soak them only a short time, one hour or less. Altho water-heating facilities are inadequate, the majority use warm water for soaking.

Bleaching. Commercial bleaches are still popular and are used most frequently in the soaking water.

Boiling. A great change from former customs is revealed by the number who no longer consider it necessary to boil their clothes. Over half do not boil any part of the washing. Most boiling is limited to towels. These are boiled probably to remove grime, which is hard to wash out.

Sudsing. Most farm homemakers use only one suds. Most prefer soft-water suds and always use it if they have enough soft water for the rinsing also. If not, they usually break the hard water for suds. Those who have only hard water, however, do not always use a softener. Most use homemade soap to economize, but many also prefer it. When using bar soap, most women dissolve it but some shave it

for use in the washing machines. Some prefer to use soap flakes for part of the washing. The first suds is usually of very hot or medium-hot water, altho lukewarm water is used by some—perhaps not from choice but because of the difficulty of heating water.

Rinsing. Two rinses are the rule for most of these homemakers, but a few use only one rinse. Soft-water rinses are preferred. Many of those who do not have enough soft water for the entire washing use it only for rinsing. A surprisingly large number use a hot first rinse in spite of the difficulty of heating the water. For the second rinse there is a definite swing over to the use of cold water, but 26 percent of the entire group and 45 percent of the observed group use warm.

Bluing. A large number of the homemakers surveyed continue to use bluing, the majority putting it into the second rinse.

Starching. All still starch some clothes, but fewer garments than formerly and fewer in summer than in winter.

Drying Clothes

All clothes are dried outdoors in summer. Even in winter 17.8 percent of the entire group and 8.7 percent of the observed group hang their entire wash outside. For the others, indoor drying places range from the basement to the attic and include every room in the house. In all rooms where clothes are dried, hooks and supports for clotheslines have to be improvised, and the activities usually carried on in these rooms have to be curtailed or discontinued while the clothes are drying.

Muscular Movements

Field workers who observed the washings of the 37 homemakers were able to check on the muscular movements which add most to the complications and physical fatigue of washing—the stooping, stretching, lifting, and carrying.

While this group is small, it is representative of the whole. The data given at the top of page 56 present, therefore, a fairly accurate picture of the rural homemaker's washday burdens. The percentages are of the thirty-seven women whose work was observed by field workers.

These homemakers did not shield themselves from stooping and stretching. Field workers helped them by introducing practical makeshifts for elevating and supporting equipment. The homemakers did try to reduce lifting and carrying by skimping on water, both hot and

	Percent of Women Who Do Work Indicated
Pump all water and carry it	56
Lift the water and carry it	89
Carry clothes baskets or water or both up and down stairs	37
Lift and carry baskets that are too large and too heavy	40
Stoop to sort clothes on the floor	32
Stoop to pick up clothes from the floor	67
Stoop to tubs or washers or both	45
Stoop to clothes baskets in washrooms	54
Stoop to baskets when hanging up clothes	67
Hold the starch pan to the wringer instead of supporting it	29
Wring clothes by hand	45
Rub spots by hand or board	24
Have insufficient clothesline	37
Have clotheslines that are too high	18
Have clotheslines that sag complicating the problem of hanging sheets	18
Have to wear heavy clothes while washing	45
Have washrooms that are too hot	5
Have no table near washing unit and in some instances, no space in which to put one	48

cold. Neither suds nor rinses were changed, replenished, drained, or skimmed often enough. Suds were often too dirty and rinses too soapy to be effective. Thus soap and dirt, left in the clothing, increased the strain on the fabric and resulted in dingy washings.

According to the field workers who observed these washings, some of them if tested by the same methods used by Mack, Wenger, Mostoller, and Baer[12] would undoubtedly reveal inefficiencies in soil removal, in whiteness retention, and in stain removal, and possibly also in preservation of fabric strength.

Management of Washing

As for size of washings, women have for the most part, exercised good judgment and reduced washings to a minimum. The greatest reduction has been made in use of household linens. Paper napkins and place mats or painted table tops have virtually replaced table linens except for "company." Turkish towelling, which needs no ironing, has replaced huck, linen, and crash. Easy-to-wash flour and sugar sacks serve as dish towels. Partly for warmth and partly to save laundry, some families use cotton-wool blankets instead of sheets during the winter and change them only once a month. Knitted cotton underwear is growing in popularity, and softer, loosely woven materials are being used for dresses, aprons, and shirts, many of these also being knitted.

Overalls and cloths used in slaughtering, however, are heavy, bulky, and coarse, and are hard to handle and to get clean. But as far as type of washing is concerned, farm homemakers are managing as best they can, for farm work requires heavy clothing, especially for men. The homemaker can make washings easier by giving more thought to her choice of fabrics. Altho dependent on what is on the market, she can to some extent choose fabrics that will stand wear and hard usage, resist soil and wash out easily.

Since much farm work is necessarily dirty work, little can be done to reduce the size of washing. In fact frequent changes of clothing make washings easier even if larger, as slightly soiled clothes are easiest to wash.

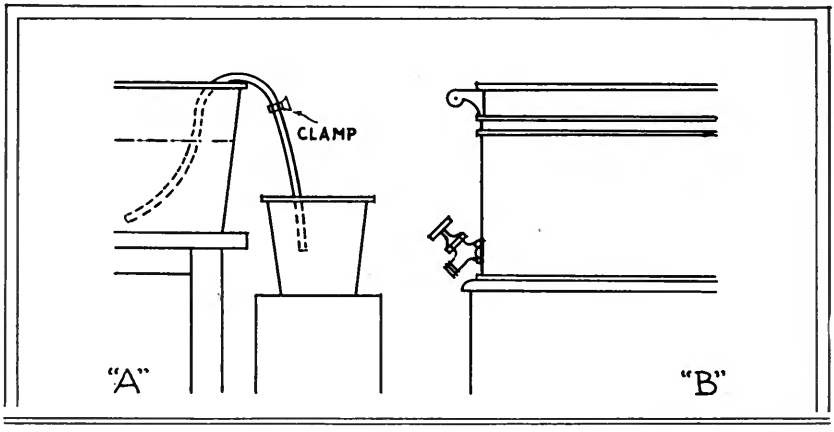
The greatest saving thru management has been made in ironing. Most women do not regularly iron towels, washcloths, sheets, pillow slips, and tea towels. They rarely iron work shirts and house dresses and never press out knitted underwear. For everyday clothing for themselves and the children they are using seersucker, which needs little pressing if stretched and properly hung up to dry.

SIMPLE DEVICES LESSEN FATIGUE

The hardships of washing in farm homes are caused by deficiencies both in physical facilities and in methods. The most important thing that the rural homemaker can do to make her washday easier is to equip her home with an electric pump, a water heater, piped hot and cold water, stationary tubs, and drains as soon as such equipment is available and the farm budget permits. In the meantime with a little thought and ingenuity she can lighten her burden by making better use of the equipment she has.

To reduce water carrying. Hose of various lengths, a piece of pipe and a funnel can be used until adequate water systems and drains can be installed. If water is piped to the washroom, it can be run directly into the boiler, washer, or tub thru a hose attached to the faucet (both hose and faucet should be threaded to prevent hose from slipping). Hot water can be run from the boiler to the machine or tub by way of a hose attached to a faucet in the end of the boiler near the bottom (see "B," page 58). A boiler with such a faucet can be bought or a faucet can be attached to an old boiler by a tinsmith or a plumber if a member of the family is not able to do it.

From the kitchen pump to the washtubs, water can be run thru an old innertube attached to the pump spout or thru a wooden trough supported under the spout. A piece of hose may be used, too, as a siphon (see "A" below)—an excellent device for carrying water from a higher to a lower point, as from a boiler to a washer or tub or from a tub to a drain.

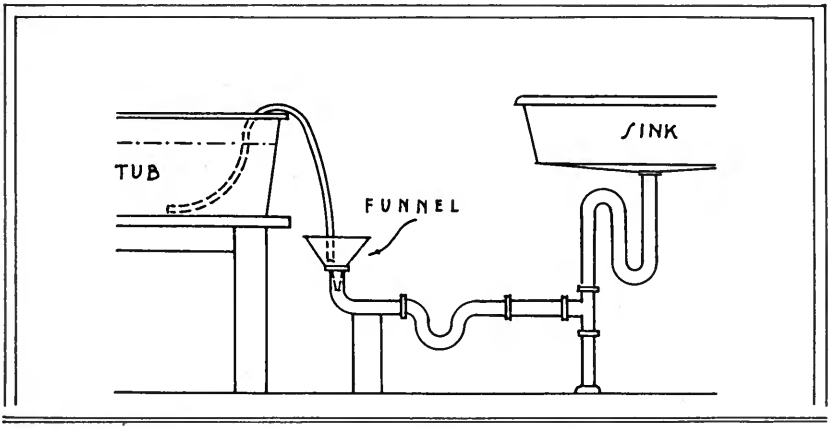


A—A siphon made from a short piece of hose carries wash water from tub to bucket. Having the bucket on a stool or a box prevents stooping. B—A faucet in the end of the washboiler near the bottom makes it easy to fill the machine or tub by means of a hose. Note threads on the faucet.

To reduce lifting of water. Except where emptying and filling of water containers can be done by a hose or a trough, lifting is still a problem. Where there is a sink drain, a T-joint (see page 59) inserted horizontally in the drain pipe saves some lifting. Another pipe with an elbow joint and an upward bend at the outer end can be attached to the T-joint. Then water can be siphoned from a washer or tub to a funnel placed in the upward bend of the pipe.

To reduce stooping. All the work of sorting, removing stains, and starching can be done at a large high table so that the worker can stand erect without strain. If such a table is not available, one can be easily made by placing planks or old doors across trestles or sawhorses. It may be difficult in some washrooms to arrange space for such a table. If the washing is done in a storeroom it would be better to rearrange the stored equipment to take up less space or move it out entirely than to subject the homemaker to unnecessary stooping.

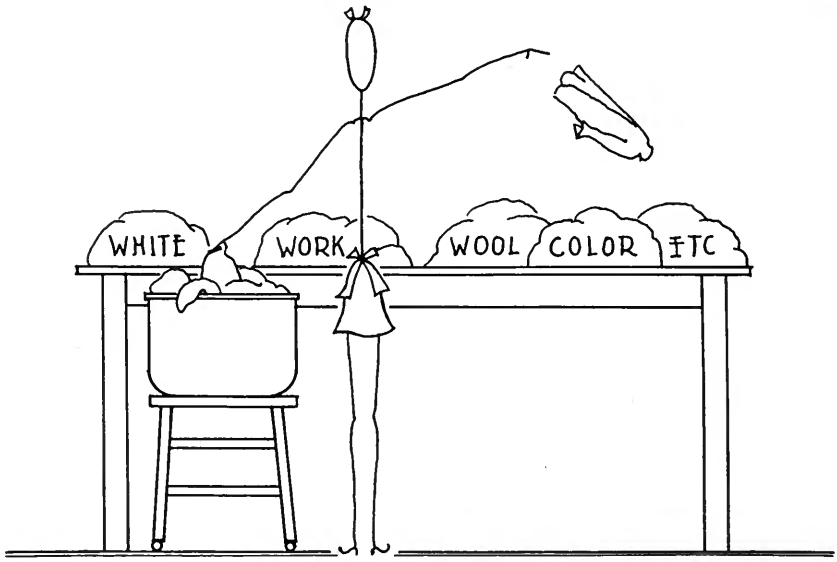
Washing and rinsing can be done with a minimum of stooping if washers, tubs, and baskets are raised to a height that is comfortable for the person who is using them and if sticks are used for taking the clothes out of the suds and the hot rinse (see bottom illustration on page 60). It is not necessary to stoop to hang up clothes either, for the clothes basket can be placed at waist level on a wheeled table or cart.



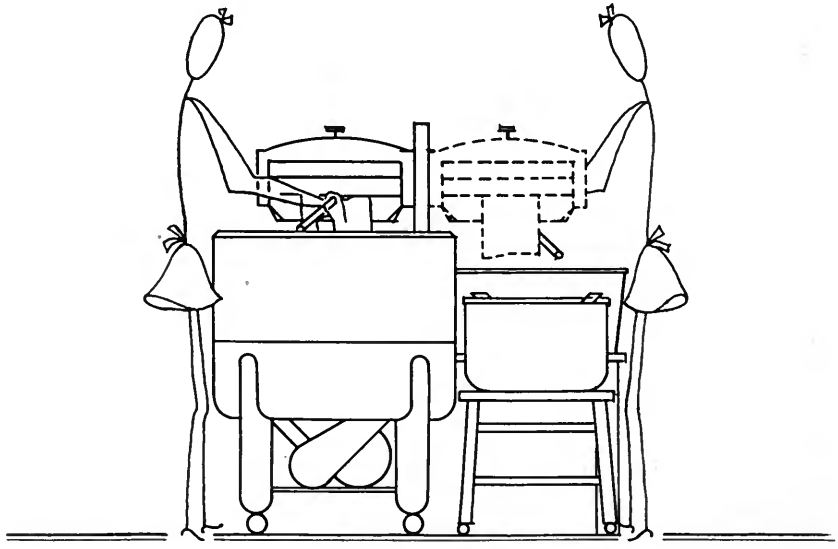
A T-joint inserted in the sink drain reduces lifting. Waste water empties itself into a funnel placed in the elbow joint of a 1- to 2-foot pipe attached to the T-joint. If the tub is too far from the drain for a siphon to be used, the water may be dipped and poured into the funnel.

To reduce carrying of clothes. Having the clothes basket on wheels (page 61) so that it can be easily pushed or drawn about saves carrying. A sturdy homemade cart made from an old tea cart, a child's coaster wagon, or a baby buggy will serve equally well if a suitable commercial cart cannot be obtained.

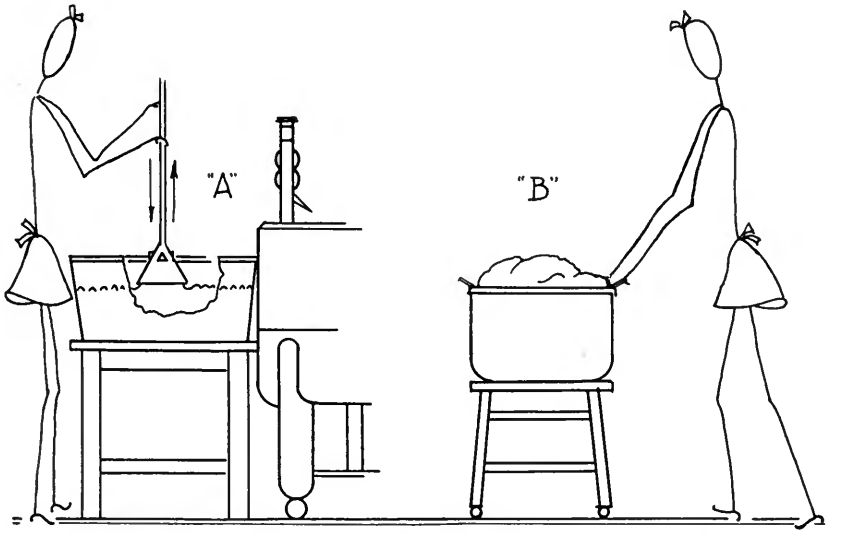
To reduce stretching. Larger, better-planned drying yards are needed. They should be set with sturdy, well-spaced posts on which there are crossarms to support enough clothesline to dry all the clothes at one time. The clothesline, preferably a stationary, rustproof wire, should be stretched taut at just the right height for the person who is to use it most (pages 61 and 62). Six feet is about right for the average woman to reach without stretching. During this survey field workers helped plan drying yards and choose equipment for homemakers who wanted help, and in some instances they saw the equipment installed and later in use.



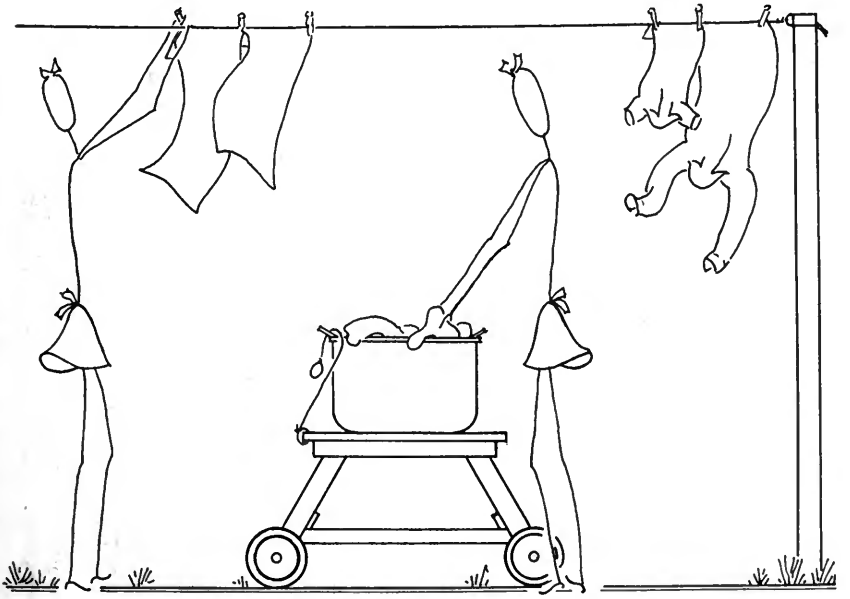
By putting the basket on a backless chair on castors and working at a table a homemaker does not have to carry the clothes or stoop to sort them.



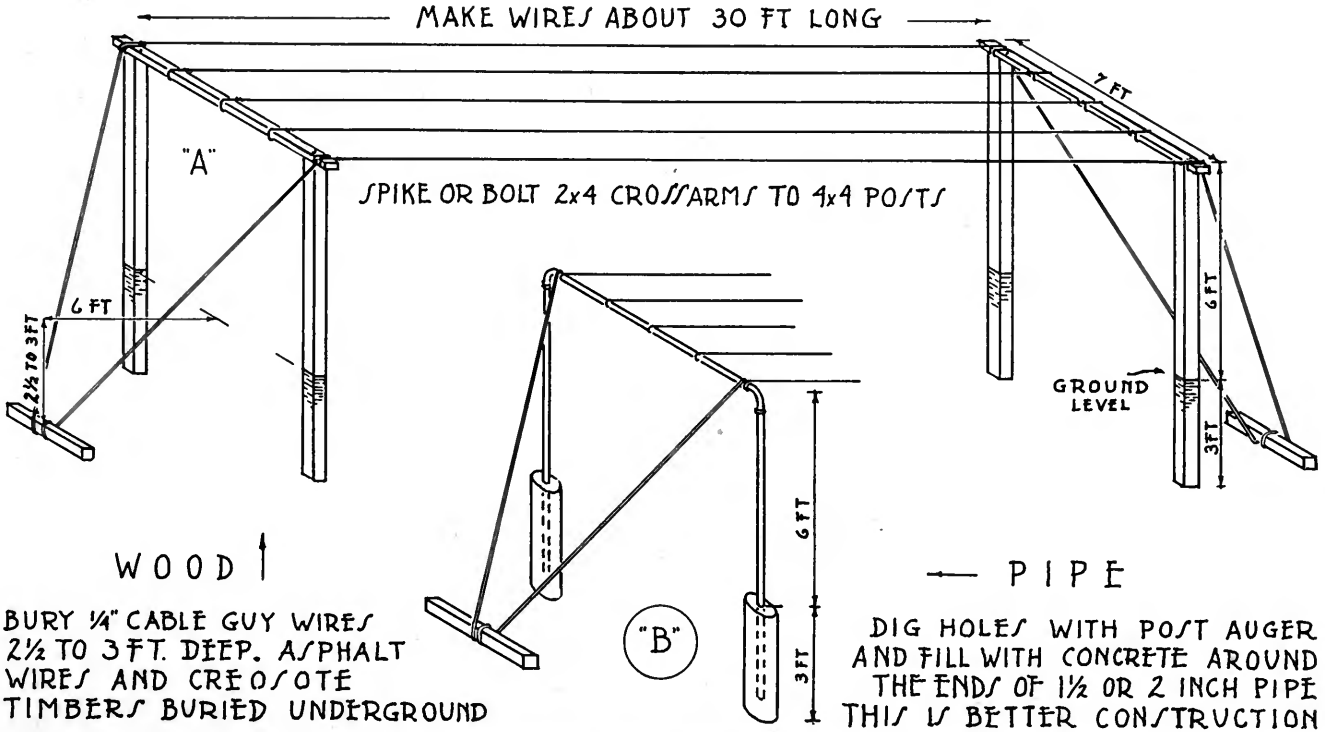
Washer, tubs, and basket are correctly raised for these workers. By using sticks to take the clothes out of the suds and the hot rinse, they stand erect at each piece of equipment and at every position of the wringer.



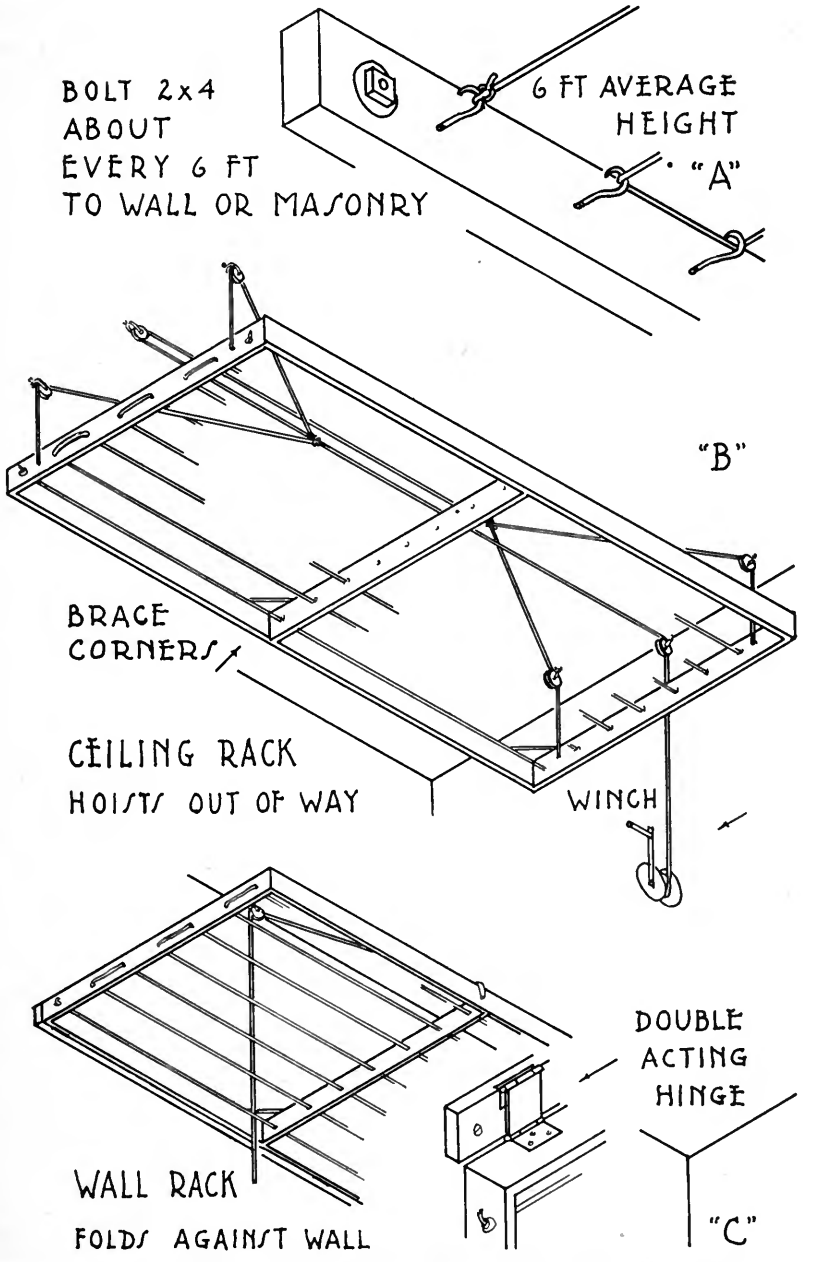
The sturdy bench for rinse tubs is the right height for using the suction plunger without stooping. Using the backless chair on castors as a support for the basket of wet clothes, the worker pushes the basket to the indoor clothesline and hangs up the clothes without lifting, carrying, or stooping.



With a taut clothesline at the right height and the clothes basket on a sturdy, homemade cart, one does not have to stoop or stretch or carry.



A plan for an outdoor clothesline. A good clothesline is taut, is built the right height for the person who is to use it, is supported on sturdy, well-spaced posts, and is long enough to dry all the clothes at one time.

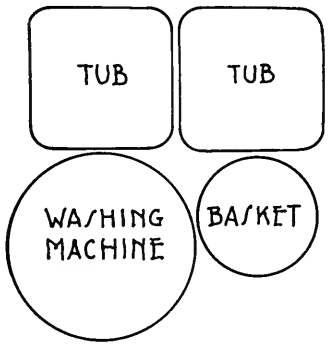


Well-constructed indoor clotheslines make washing easier in winter. Stationary lines can be tied to hooks in the wall, ceiling racks can be lifted up out of the way, wall racks can be folded against the wall when not in use.

To reduce number of movements. Washing can be done with less motion if suitable equipment is used, if it is compactly arranged, and if there is enough of it for completing a process once it is started. Observations of washings revealed the following needs:

Three tubs instead of two if clothes are to be soaked.
Vessels of proper size and shape for heating water where there is no tank heater.
Plungers for working the clothes up and down in the rinses.
Smaller and better shaped clothesbaskets.
Plenty of clothespins in a container that can be pushed along the line or one that can be worn as an apron (if container is worn as an apron, it should have shoulder straps to support part of the weight).

An arrangement of equipment that permits the work to flow from right to left for a right-handed worker or from left to right for a left-handed worker saves a great deal of time and energy. This arrangement of washing equipment, if placed at least 2 feet from the wall and from other equipment, permits free movement around the outside of the washer, tubs, and basket. Even tho such an arrangement saves time and energy, it cannot be used in some small laundry rooms without sacrificing the best use of light and accessibility to other conveniences. In homes that do not have running water, castors should be put on all units so that they can be moved around for filling and emptying.



Arrangement of equipment

To increase safety and relieve strain. Better flooring is needed in most of the washhouses and on porches that are used for laundry purposes. In washrooms where there is no flooring or where floors are in poor condition, with uneven flooring, broken boards and parts rotted away, it is impossible to use the castors on equipment. More important than this, such floors are safety hazards, as are many of the steps in these washrooms—some broken, some loose, and some entirely gone.

SUMMARY OF FINDINGS AND RECOMMENDED PROGRAMS TO HELP RURAL HOMEMAKERS

It is obvious that the working conditions in farm homes make the homemakers' work physically hard. The difficulty is not entirely a lack of modern conveniences, for more than equipment or arrangement is involved. The washings, for example, not only are very large but include many badly soiled garments made of heavy, bulky material, hard to get clean and hard to handle. The homemaker's program is extremely heavy both as to amount and kinds of work. She has many responsibilities, not all of them directly related to homemaking as such, altho all have to do with homemaking and family living. Often she contributes directly to the family income as well as the family larder by taking care of and selling butter, chickens, eggs, berries, and fruit. She often helps out in the barns and fields during busy seasons, thereby contributing indirectly. Under these conditions the homemaker has many management problems, and her efficiency depends largely on her ability to plan and organize, to carry out details and yet to see things in their entirety over a long period of time. Seldom does she have as good health and as much strength as she needs for her job.

In every occupation there are anxieties and worries peculiar to the job, but as farming is more intimately shared by all members of the family than are most occupations it puts a heavier responsibility on the women and children. They not only help with the work of earning the family living, but they have little escape from such work, because of the long and irregular hours and because of living and working in the same setup. All members of the farm family are more or less concerned with the family's financial status. Work and talk of work occupy a large part of their day. In most urban homes earning a living is more widely separated from home activities and family life.

In the farm home the homemaker has the mother's usual load of the family's emotional problems and she also has those that grow out of the farming problems. Her ability to promote wholesome family relationships will determine whether or not the family functions smoothly as a unit and gets the maximum satisfaction out of working and living together. It is therefore important to the welfare of the whole family that the mother have fewer management problems and that she use all needed devices for lessening her fatigue.

Better Housing Is Needed

Most of the farmhouses visited were not well planned. The work rooms and living rooms are too small for the number of persons living in the home and for the number of activities carried on in each room. There are often too many stories and too many floor levels; the stairs are frequently steep and narrow (sometimes with uneven risers), and are dark and without railings. Trap doors, all too numerous, also add to dangers of household accidents.

Even in homes that have water systems and electricity, inlets and outlets for water, power, and lights often have little, if any, relation to work units. Most homes have inadequate storage space—few storerooms, few shelves or racks, either in or out of workrooms. There are not enough working surfaces either of the built-in kind or of those acquired thru furnishings, and those that are in use are too low or too high for the persons using them.

Some of these inconveniences obviously have resulted from short-plan improvements made one at a time to meet a specific need. A room or two was added, a partition was removed to enlarge a room, a second floor was erected, or a cellar was dug and a stairway built to give access to it. A closet, porch, or runway was added or built into space intended for another purpose. These frequently mean a step up or down, especially where areas over or under stairways have been used.

Another problem that is prevalent in farm homes arises out of the many uses to which rooms are put. The farm kitchen, for instance, often serves not only as a four-purpose room for the family but also as a workroom for some of the farm activities. As a kitchen it gives space to all the usual household activities, such as cooking, cleaning, and laundering. Where there is no bathroom or lavatory, it may be used by the whole family for washing, bathing, and dressing. In many homes it serves as the dining room, as most farm families eat in the kitchen to save time and steps. For many families it is the sitting room, especially in winter, for it is usually more comfortably heated than other rooms and has more table space at which the family can read, write, sew, and study.

Farm activities that are carried on in the kitchen include canning fruits, vegetables, and meats, curing meats, sorting and storing eggs, dressing chickens, and sometimes separating cream and making butter (milk houses are usually required when milk is marketed). Sometimes produce is stored in a cellar under the house and the only access to it is thru the kitchen.

The most serious problems of the farm homemaker, however, have to do with lack of central heating, indoor toilets, running water, and drains. Without these conveniences her work and management problems are vastly increased. Cooking, cleaning, and laundering—three ever-present, large-scale activities in farm homes—are hard work where there is a shortage of water (both hard and soft), where neither hot water nor cold is piped, where taps (if any) are inconveniently placed, and where there are no sinks and drains.

In homes that are not centrally heated, living quarters must be reduced in winter and living standards lowered. Members of the family must double up, move downstairs, or sleep in cold rooms, enduring the strain of living in cramped quarters and undergoing the danger of exposure when going from heated into unheated rooms. These seasonal inconveniences are health hazards, both mental and physical, their seriousness depending somewhat on the ability of the homemaker and her family to cope with their problems.

Such physical conditions cause discouragement, inefficiency, and carelessness, and are undoubtedly basic causes of the excessive fatigue complained of in one form or another by the majority of homemakers. Even tho all the effects of poor living conditions cannot be accurately measured, the problem must be recognized and provided for in any program that is set up to relieve the homemaker's tensions and pressures.

Practical Adult Education

Heavy work programs and many responsibilities are incidental to living on a farm. For these reasons the only way that farm women can help themselves is thru management and attitude. It is possible that specialists in time and energy management could be of more help to rural homemakers than they now are. It is true that these homemakers need long-time planning, larger work units with better work combinations, rearrangement of furnishings and equipment, and suggestions for the use and care of equipment, but unless specialists have first-hand knowledge of the actual conditions under which farm women work, their solutions to these problems are likely to be too theoretical and impractical for use in farm homes. Too much appears to have been set up in terms of laboratory and urban conditions to be of practical or immediate value on the farm.

It is obvious that many of the recommendations made for better homemaking cannot be applied in farm homes where the work is heavy and the facilities limited. To put such recommendations into practice

would place too heavy a demand on the ingenuity and versatility of the average homemaker.

Farm women are seeking help, but they want practical suggestions. Their interest is sincere and, as is shown by this survey, they will cooperate and respond, but they are only confused by theoretical presentations of material. If specialists in home economics are to be of the greatest service to farm women, they must do more farm visiting, must have closer contacts with farm women, and in some instances must actually work out problems in the farm home with the homemaker's usual setup.

A practical program would include more demonstrations of methods and a well-devised plan for checking the value of these methods in the home, first by the homemaker herself, then by others working out the same problems, and finally by the specialists who are developing the program. Such a program could be carried on by meetings in the homes. These meetings might be conducted monthly by lay leaders and home advisers in the community and at regular intervals by visiting specialists.

A service of this type would stimulate the homemaker to greater effort in working out her problems and would enable her to do it much sooner than when working alone. United action, motivated by individual contributions and group enthusiasm, could do much to lift the level of participation and learning and to relieve the loneliness of these women and the tendency, which is characteristic of human beings, to get into a rut when working alone under pressure and disadvantages. A woman who works alone and does not discuss her problems is more likely to become resigned to conditions which she could improve, for prolonged pressure and inconveniences may cease to be challenges unless counteracted by group reactions and group stimulation.

Solutions to the problems of laundry, housecleaning, kitchen arrangement, dishwashing, planning, and cooking require certain knowledge, skills, and physical facilities. As the information necessary for solving these problems lends itself readily to group handling, it can be disseminated thru adult-education programs. Methods, plans, and practices can be explained and demonstrated. These, being objective in nature, are easily worked up and easily comprehended on various levels. It is true that the rural homemaker has been greatly benefited by extension, but it is also true that she needs much more help if her homemaking is to be made as easy as that of her urban sister.

Education for Mental Health

There are other less tangible problems of rural homemakers which are even more serious than their housekeeping problems—in fact, of such magnitude as to go over into regional social problems. These have to do with family living—the education of children, the limitations of rural schools, economic returns from farming, shortages of labor, and lack of medical and nursing care. Not much can be done about these problems by individuals working alone. They must be solved by "movements," by a long-time program of concentrated and concerted action. Adult education on these subjects has little to offer in immediate practical returns, but it can stimulate regional provisions for obtaining at least better educational and medical services.

The concern of these women about family relationships does, however, offer a genuine challenge to specialists. Adult-education classes can help materially by increasing understanding and rapport among members of the family and the community, but a counseling service would strengthen the program as it would help individuals to understand their difficulties and straighten them out more quickly.

The whole problem of mental health is, of course, less well handled in all communities than the problem of physical health. In so far as they concern mental health, the disadvantages of country life are not much greater than those of city life, for the scarcity of trained personnel and the prohibitive cost of mental health services practically exclude from such help all but the extremely wealthy and the destitute.

There is, however, a growing recognition that all classes of people in all areas need mental health services. Programs for maintaining mental health are taking on the proportions of great social movements rather than of local or community effort. State programs, where they exist, include rural as well as urban areas, but are as yet inadequate to meet the needs.

Some states have mobile health units, but their emphasis is as yet entirely on the programs for the mentally ill. What is needed is mental health service for normal people, the same type of service that is offered in some of our more advanced urban districts: consultation centers where emotional difficulties, adjustment problems, and other difficulties in family relationships can be treated by mental hygienists. Discussion groups and classes in mental hygiene for the homemaker would be an essential part of such service.

The war has temporarily retarded the progress of mental health movements for the civilian population and has even interfered with

the small gains made in the most advanced urban centers. But the improvement of mental health services is likely to come rapidly after the war, when the need for such services will be more clearly recognized.

The mental-hygiene approach to problems of fatigue has much to offer and is probably the next area in which it will be recognized that intensive work is needed.

Research Needs and Application of Findings

Engineers and specialists in housing can give genuine help in reducing the physical fatigue of homemaking. Already their recommendations and suggestions[4, 8, 9, 13] covering plumbing, drainage, and heating, which have appeared in bulletins and pamphlets, have proved beneficial to a large group of farm families. But many more mechanical devices will have to be developed for farm homes. Such devices must be inexpensive enough to be used in homes where the income is limited and simple enough so that the average farmer, who is not a skilled mechanic, can install the equipment, make the repairs, and do the remodeling.

More research in practically every household task is urgently needed. Whether the research is carried on by the various specialists in university laboratories or in commercial centers equipped to make such studies, one of the problems is to get the findings to those who will put them to use in everyday living. Research workers, for the most part, are not, however, primarily interested in putting the results of their experiments to practical use and are not always competent to give this service to the people. Field workers are needed who are trained and experienced in applying research findings. They must be persons of unusual insight, who are good demonstrators and are skilled also in family case-work technics.

Homemaking centers or clinics staffed with these workers and with a consulting staff of visiting housekeepers, nutritionists, public health physicians and nurses, mental hygienists and psychiatric workers, housing experts, engineers, and in fact representatives of all sciences which contribute to family living, would be of inestimable value. Thru organized classes large numbers of people could be given the opportunity to obtain further education in all phases of family living. These services are needed for all people both rural and urban.

LITERATURE CITED

1. BEERS, H. W. A portrait of the farm family in central New York state. Amer. Sociol. Rev. **2**, 591-600. 1937.
2. ———— Measurements of family relationships in farm families of central New York. N. Y. (Cornell) Agr. Exp. Sta. Mem. 138. 1934.
3. BEYER, WILMA C. A comparison of the laundry techniques recommended in the literature with those practiced in Illinois farm homes. Univ. of Ill. (*master's thesis*). 1942.
4. BUSWELL, A. M., and LEHMANN, E. W. Soft water for the home. Ill. Agr. Exp. Sta. Cir. 393. 1939.
5. FLORENCE, P. SARGENT. Economics of fatigue and unrest. Henry Holt and Co., New York. 1924.
6. ILLINOIS FARM HOUSING SURVEY. Summary report of county extension program-building committee. Ill. Col. Agr. (*mimeo.*).
7. KNOWLES, ELEANOR ELAINE. The most tiring household tasks as reported by 582 homemakers. Cornell Univ. (*master's thesis*). 1938.
8. LEHMANN, E. W., and HANSEN, F. P. Water and plumbing systems for farm homes. Ill. Agr. Exp. Sta. Cir. 303. 1925.
9. LEHMANN, E. W., and KINGSLEY, F. C. Electric power for the farm. Ill. Agr. Exp. Sta. Bul. 332. 1929.
10. LINDQUIST, RUTH. The family in the present social order. N. C. Univ. 1931.
11. LINDSTROM, ELLEN R. The cost of laundry in 188 Kansas homes. Kans. State Col. Agr. Grad. Studies and Res. in Home Econ. 1937-38.
12. MACK, PAULINE B., WENGER, HELEN N., MOSTOLLER, REBECCA J., and BAER, MARY T. A method for measuring the efficiencies of laundry procedures. Pa. State Col. Bul. Home Ec. Res. Ser. Pub. No. 2.
13. PARKS, R. R. Building a sink cabinet. Ill. Agr. Ext. Serv. (*mimeo.*). 1940.
14. PIDGEON, MARY ELIZABETH. Women in the economy of the United States of America. U. S. Dept. Labor, Women's Bur. Bul. 155. 1937.
15. PRESIDENT'S CONFERENCE ON HOME BUILDING AND HOME OWNERSHIP. Vol. 9, Household management and kitchens: Chap. III, Management of household operations. Washington, D. C. 1932.
16. SATER, V. ENID. Time and cost evaluation of home laundering. Wash. Agr. Exp. Sta. Bul. 317. 1935.
17. SWARTZ, VENONA W. The human energy cost of certain household tasks. Wash. Agr. Exp. Sta. Bul. 282. 1933.
18. VERNON, H. M. Industrial fatigue and efficiency. E. P. Dutton and Co., New York. 1921.
19. WARD, GLADYS. What Illinois homemakers want. Ill. Agr. Ext. Serv. (*mimeo.*). 1931.
20. WARREN, JEAN. Use of time in its relation to home management. N. Y. (Cornell) Agr. Exp. Sta. Bul. 734. 1940.
21. WILSON, MAUD. Laundry time costs. Jour. Home Econ. **22**, 735-40. 1930.
22. ———— Use of time by Oregon farm homemakers. Ore. Agr. Exp. Sta. Bul. 256. 1929.
23. ————, ROBERTS, EVELYN H., and THAYER, RUTH. Standards for working-surface heights and other space units of the dwelling. Wash. Agr. Exp. Sta. Bul. 345. 1937.

APPENDIX

On the following pages are copies of the forms used in making the surveys described in this bulletin.

QUESTIONNAIRE USED IN 1941 FOR CONTROLLED INTERVIEWS AND HOME VISITS

411 Homemakers in 7 Counties Cooperating

SURVEY OF HOME LAUNDRY CONDITIONS

Name..... Address..... County.....

Directions: Please place a check (√) to show your answer to each question. Please note that the box precedes the answer.

1. Where do you live? ☐ a. On a farm. ☐ b. In town.
2. Is all of your family laundry done at home? ☐ a. Yes. ☐ b. No.
3. How often is your family laundry done? ☐ a. Weekly. ☐ b. Twice-a-week. ☐ c. Every two weeks. ☐ d. At other intervals of time.
4. What time of day do you usually wash? ☐ a. Forenoon. ☐ b. Afternoon. ☐ c. Evening.
5. Do you have a washing machine? ☐ a. Yes. ☐ b. No.
6. If so, what type is it? ☐ a. Cylinder (tumbler). ☐ b. Vacuum (cup). ☐ c. Agitator.
7. By what power is your machine run? ☐ a. Electricity. ☐ b. Gasoline. ☐ c. By hand.
8. What kind of tubs do you use? ☐ a. Movable. ☐ b. Stationary or built-in.
9. If movable, how are they moved? ☐ a. By castors. ☐ b. Must be lifted.
10. What is the position of the tubs? ☐ a. Placed against wall. ☐ b. Free on all sides.
11. Where is your laundry work done? ☐ a. In kitchen. ☐ b. In basement. ☐ c. In laundry or utility room on first floor. ☐ d. Back porch. ☐ e. Outside building. ☐ f. Other place.
12. Do you use artificial light while doing laundry? ☐ a. Always. ☐ b. Usually. ☐ c. Sometimes. ☐ d. Seldom. ☐ e. Not at all.
13. What type of artificial light do you use? ☐ a. Electric. ☐ b. Gas. ☐ c. Gasoline. ☐ d. Kerosene lamps. ☐ e. Other.
14. What kind of wall finish has your laundry room? ☐ a. Painted (shiny). ☐ b. Painted (dull). ☐ c. Papered. ☐ d. Whitewashed. ☐ e. Unfinished plaster. ☐ f. Unfinished wood. ☐ g. Unfinished cement blocks.
15. What is your source of hot water? ☐ a. Heating on the kitchen range. ☐ b. Heating on a stove in the laundry room. ☐ c. Reservoir of range. ☐ d. Hot water in faucets. ☐ e. Other means.
16. How do you get your water for washing? ☐ a. By a hand pump in dwelling. ☐ b. By a hand pump out-of-doors. ☐ c. From faucets.

17. Do you use natural soft water for laundry work? ☐ a. For all laundry. ☐ b. Use soft only for suds water and hard for rinsing. ☐ c. Use all hard water.
18. If you use hard water, do you soften it? ☐ a. Automatic softener. ☐ b. Trisodium phosphate. ☐ c. Other washing powder. ☐ d. Do not soften it.
19. How do you get water to the tubs? ☐ a. By hose. ☐ b. By carrying in pails. ☐ c. By faucets over tubs. ☐ d. By other means.
20. Where is the water from your tubs emptied? ☐ a. Floor drain. ☐ b. Sink drain. ☐ c. On ground outside.
21. How is the wash water emptied? ☐ a. Dipped from tub and carried in pails. ☐ b. From drain in tub flows to floor drain. ☐ c. From drain in tub and carried in pails. ☐ d. Tub carried. ☐ e. By a pump. ☐ f. Other means.
22. What is your custom about washing sheets? ☐ a. Both sheets every week. ☐ b. Bottom sheet each week. ☐ c. Some other custom.
23. Do you often listen to music or other radio entertainment while you wash clothes? ☐ a. Yes. ☐ b. No.
24. If so, what do you prefer to hear? ☐ a. Fast music. ☐ b. Slow music. ☐ c. Serial sketches. ☐ d. Cowboy tunes. ☐ e. Jazz. ☐ f. Other features.
25. What is your source of music? ☐ a. Radio. ☐ b. Victrola. ☐ c. Someone in family playing or singing. ☐ d. Your own singing.

Directions: Please write numbers or words in the blanks to answer the following questions.

26. How many are there in the family for whom you wash? .....
    Ages of family members: Men..... yrs. Women..... yrs.
    Boys..... yrs. Girls..... yrs.
    Number of relatives or visitors .....
    Number of hired helpers: Men..... Women.....
27. If you have a washing machine, what make is it? .....
28. What day of the week do you usually wash? .....
29. What are the approximate dimensions of your laundry room?
    Length ..... ft. Width ..... ft. Height ..... ft.
30. Please draw a rough sketch of the floor plan of the room where you do your laundry work, showing the approximate placing of equipment and windows, also the position of artificial lighting fixtures.
    (Space for floor plan)
31. How many windows are there in the room? .....
    Approximate size: Length ..... ft. Width ..... ft.
    Height ..... ft. Are they curtained? Yes ..... No.....
32. How many watts in the total of the electric bulbs in your laundry room? .....

33. What color are the walls of your laundry room? .....
34. What is the approximate temperature of your laundry room while you are working there? .....
35. About how far is the telephone from the place where you do your laundry? ..... ft.
36. Approximately how far is your kitchen range from your laundry equipment? ..... ft.
37. About how far is your water supply from your washing equipment? ..... ft.
38. About how far is waste water taken from the tubs for disposal? ..... ft.
39. Where do you dry your clothes in winter? .....
    In summer? .....
40. What is your average number of tablecloths in each washing? .....
    Of napkins? .....
41. Does someone usually help you with carrying water or doing the washing? ..... Who? ..... What help does this person give? .....
42. Is your laundry room in any way uncomfortable or inconvenient? ..... In what way?.....
43. Do you like to wash clothes? ..... Why or why not? .....
    .....

QUESTIONNAIRE USED IN 1943 FOR CONTROLLED INTERVIEWS AND HOME VISITS

207 Homemakers in 7 Counties Cooperating

FARM-HOME SURVEY

Name..... Address..... Date of visit.....

I. FARM

1. Size, tenure, and help

a. Number of acres ..... b. Rented ..... c. Owned .....
d. Buying ..... e. Number of helpers ..... Family .....
Hired .....

2. Farm business

a. Type of farming done: (1).....
(2).....
(3).....
b. Chief product.....

c. AAA.....
d. Number of chickens raised.....
e. Chickens cared for by.....
f. Other side interests or projects.....
.....
.....

3. Equipment

a. Tractor ..... b. Combine ..... c. Corn picker .....
d. Milking machine ..... e. Horses ..... f. Other equipment .....
.....

4. Gardening

a. Vegetable garden ..... For family use ..... As source of income ..... Work done by .....
b. Flower garden ..... For family use ..... As source of income ..... Work done by .....
c. Other types (example: mushrooms).....
For family use ..... As source of income .....
Work done by .....

5. Other out-of-door work done by homemaker .....
.....
.....
.....

6. Farm problems

a. Insufficient income.....
b. Landlord not cooperative.....
c. Other problems.....
.....
.....

II. HOME

1. Size of house and family

a. Number of rooms in house ..... b. Size of family .....

2. Conveniences

a. Electricity: (*1*) Highline ..... (*2*) Delco .....
b. Kind of light .....
c. Kind of kitchen range ..... Kind of laundry range .....
d. (*1*) Source of heat: (*a*) Furnace ..... (*b*) Stove .....
(*2*) Fuel: (*a*) ..... (*b*) .....
(*3*) Number of rooms heated in winter .....

e. (*1*) Refrigeration ..... (*2*) Kind .....
f. (*1*) Vacuum sweeper ..... (*2*) Kind .....
g. (*1*) Washing machine ..... (*2*) Kind .....
h. Source of water:
(*1*) Piped hot:
(*a*) Kitchen ..... (*b*) Laundry ..... (*c*) Bath .....
(*2*) Piped cold:
(*a*) Kitchen ..... (*b*) Laundry ..... (*c*) Bath .....
(*3*) Hand pump in kitchen .....
(*4*) Outside hand pump .....
i. (*1*) Water heater ..... (*2*) Kind .....
j. Toilet: (*1*) Bathroom ..... (*2*) Outside toilet .....
k. (*1*) Kitchen sink and drain ..... (*2*) Where .....
(*3*) Laundry sink and drain ..... (*4*) Where .....
l. Other equipment .....
.....
.....
.....

3. Other furnishings

a. Piano..... d. Books..... g. Rugs.....
b. Radio..... e. Magazines..... h. Others.....
c. Musical instruments..... f. Pictures..... .....

4. Evidences of hobbies and special interests

a. Landscaping..... f. Sewing..... k. Knitting.....
b. Flower gardening..... g. Rug-making..... l. Reading.....
c. Vegetable gardening..... h. Quilt-making..... m. Music.....
d. Raising house plants..... i. Crocheting..... n. Others.....
e. Chicken raising..... j. Embroidering..... .....

5. Activities engaged in outside the home

	Homemaker	*Husband*	*Children*
a. Home Bureau.....	.....	.....	.....
b. 4-H Club leader..	.....	.....	.....
c. Church.....	.....	.....	.....
d. School	.....	.....	.....
e. Community.....	.....	.....	.....
f. Others	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....

6. Home-management problems

	Time	*Management*	*Skills*
a. Planning			
b. Cooking			
c. Dishwashing			
d. House cleaning			
e. Laundry — washing			
— ironing			
f. Heating house			
g. Need for more room			
h. Water supply			
i. Need sink and drain			
j. Need bathroom			
k. Need electricity			
l. Kitchen arrangement			
m. Storage (cupboards, closets)			
n. Child development			
o. Family relationships			
p. Transportation			
q. Others			

OUTLINE FOR NOTES ON OBSERVED WASHINGS 1943

1. Describe washroom and draw diagram to scale.
2. Record distance walked without load.
3. Record distance walked with loads (water, clothes, starch, line).
4. List equipment, including tables, benches, wagon, etc., as well as machine, tubs, boiler, pans, etc.
5. Make diary record covering practices in sequence, including interruptions such as telephone calls, door bell, cooking, trips to barn or wood shed, children's wants, etc.
6. Record time for each process, number of loads, number of suds, number of rinses, amount of water, hot and cold.
7. Give weekly schedule.
8. Give washday schedule.
9. List homemaker's comments on her practices.
10. List homemaker's requests for help.