Sanitation of the Rural Home

by

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in the

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Introduction.

The sanitation of the home is a subject of growing importance and interest. As one of the problems of social and economic science it is beginning to receive the attention it may rightly claim. The women of the farm should not only read the literature given out by the boards of health and other authorities, but, by combining theory with practice, as few others can they should aid in solving the great questions which seriously affect the interest of the home and the family.

It is the plan of this thesis to present the subject of sanitation in such a way that it could be used as a plan of work by a sanitation specialist in the Extension Department of the Oklahoma Agricultural and Mechanical College. It was written according to the projects used in extension work which are given out by the United States Department of Agriculture.

The author wishes to acknowledge with thanks the valuable advise and criticism given by the Extension Department, English Department, and the Department of Sanitation of the Oklahoma Agricultural and Mechanical College in the preparation of this thesis.

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Written Project.

Name of Project: Extension work in Sanitation.

Leader: S. G. Brintle.

Location: State of Oklahoma.

Headquarters: Stillwater, Oklahoma.

Date Effective: January 1, 1925.

Legal Authority: Same as in Project No. I.

History: This project was carried on in Oklahoma by the Extension Division from January 1, 1915 to January 1, 1921. Dr. D. B. Tucker, a practical physician, familiar with rural conditions, was employed as leader of this project. As a result of this work, rural homes and rural schools were made more sanitary.

Object: To improve the sanitary practices and conditions of the rural homes and schools.

A. To provide the women and girls of club age in rural district with the information that will enable them to heat, light, ventilate and clean their homes. To enable them to provide food in a sanitary manner.
B. To observe all rules of sanitation concerning the water supply, toilet, garbage and waste material.
D. To understand and insist upon sanitary conditions in rural schools, public meeting places and local markets.

Method of Procedure: A specialist in sanitation shall be employed who will cooperate with the county and Home demonstration agents in every possible way to bring about this project. She will give illustrative lessons on sanitation; carry on campaigns; assist in planning programs of work; in organizing communities or groups; in carrying out short courses, in conducting schools and rallies and similar lines of work. She will provide information for publication for agents, for clubs both adult and Junior and for any other cooperating organization seeking such assistance.

Organization: A specialist shall be employed who will have

charge of this project. The administration of this project shall be in direct charge of the State Home Demonstration Department under the general plan of project number one. The teachings given out by this specialist must at all times conform to the teaching of the Department of Home Economics of the Agricultural and Mechanical College of Oklahoma and with the recommendations of the United States Department of Agriculture. She shall prepare a plan of work for each year, and submit an annual report of her work to the State Home Demonstration Department and to the States Relation service. The specialist shall be responsible to the department of Home Economics of the Oklahoma Agriculture and Mechanical College with reference to subject matter but will be under the administration supervision of the State Home Demonstration Agent. Weekly reports by the specialist shall be made for this project to the Director of the Extension, also an annual report and such other reports as may be deemed necessary.

Cooperation: Same as in project number one.

Questionnaire on Sanitation.

1. Do you have a thermometer in you living room to register the temperature of your room? ----- 75% no.

2. Can the sunshine reach each room of your house some time during the day? During every season? ---- 100% Yes.

3. Do you sleep with at least two widnows open in your bedroom to give plenty of fresh air? ----- 100% yes.

4. Do you have an inlet and an outlet for fresh and stale air respectively, in your living room? ----- 90% yes.

5. Do you dust with a moistened or oiled cloth so as not to stir up the dust and germs? ----- 90% yes.

6. Do you scald your dishes to make sure they are sterile?----- 90% yes.

7. Do you scald your separator once a day to remove sour milk and germs? 80% no.

8. Do your cows eat while you milk, and scatter germ laden feed in the air and milk? 90% no.

9. Are there flies and mice in your kitchen that deposit germs on the furniture and food?----- 60% no.

10. Is your cellar damp and musty, furnishing a favorable home for molds and bacteria? ----- 60% no.

11. Is your well at least 150 feet from all out-houses, so that water coming from such places will not get into the well?---- 100% yes.

12. Is your well on an elevated place with a curb that protects it from surface water? ----- 90% yes.

13. Do you have running water in your house? ----- 100% no.

14. Is your toilet fly-proof so that flies cannot visit both toilet and kitchen? ----- 100% no.

15. Do you use a disinfectant in your toilet to kill germs and keep out odors? ----- 80% yes.

16. Are your chickens allowed on your well curb and back porch? ----- 90% no.

17. Are tin cans left in your back yard that could catch water, furnishing a breeding place for mosquitoes? 80% no.

18. Does your school have a sanitary toilet? ----- 80% no.

19. Is your grocery store free from flies or insects? -----70% no

20. Do you camp out in summer were surroundings are not as sanitary as your home is? ----- 100% no.

One hundred and twenty four of these questionnaires were mailed out to the mothers of country homes in the different parts of the state of Oklahoma. One hundred and twelve were answered and returned. This questionnaire gives the average of the results obtained.

The conclusions from those answered are that the toilets and outside surroundings are in a very poor condition, while the ventilating and heating practices were more sanitary.

Plan of Work by Months.

November:- Gather Reports from County Home Demonstration Agents.

December:- Make annual report and prepare work for coming year.

January:- Present work to County Home Demonstration Agents and make plan of work for the year.

February:- Do emergency work in the sanitary school campaign.

March:- Do Field work in eastern section of the state.

April:- Do field work in the eastern section of the state and emergency work in the fly campaign.

May:- Same as for April.

June:- Do field work in eastern section of state.

July:- Do field work in western section of state.

August:- Assist in Farm Congress and Agents Meeting and do field work in western section of state.

September:- Do field work in western section of state.

October:- Same as September.

Outline of Illustrative Demonstrations given by Specialist.

I. Kitchen Equipment.
   a. Dishes
   b. Silver
   c. Cooking utensils
   d. Stoves
   e. Sink and plumbing.

II. Food Storage Places.
   a. Refrigerators
   b. Pantries
   c. Cellars.

III. Milk.
   a. Barn
   b. Cows
   c. Milker
   d. Utensils
   e. House.

IV. Yard and Surroundings.
   a. Water supply
   b. Toilet
   c. Garbage
   d. Yard.

V. Sick Room and Diseases.
   a. Room
   b. Bed
   c. Patient
   d. Attendant
   e. Disinfection and fumigation.

Illustrative demonstration on Kitchen equipment.

a. Dish drainer.

Equipment:

Dish pan, bread pan, tin can, thirty feet of number fourteen wire, nailed dishes, and wire pliers.

Discussion:

Perhaps no time spent in the house work is more begrudged by the housekpeper than that spent in washing and wiping dishes. Even the father and children are interested in finding some method of washing dishes that will do away with part of the time and labor spent three times a day at this job. The washing of the dishes need not be the hated work of the home if plenty of warm soap suds can be had and the dishes are not allowed to stand and dry. They should be washed immediately after each meal. The work of wiping the dishes can be lightened if the dishes are thoroughly scalded. However the work can be made yet lighter by the use of a dish drainer. The dishes are washed, placed in the racks of the dish drainer and scalded thoroughly with boilding water. In a few minutes they are dry and clean. This drainer adds no expense to the process at all, for we want our dishes scalded even if they are wiped, and it saves much time and expense. It not only saves the time and labor of wiping the dishes but it does away with the too often insanitary dish towel which is the biggest item on wash day. If we can re-

move the burden of wiping dishes and washing dish towels we have made a great improvement in the duties of the household.

Procedure:

A most satisfactory dish drainer can be made by using an ordinary bread or biscuit pan and racks made of soft number fourteen wire. By using a pair of pliers, the wire can be bent into the proper shape for forming the racks. The racks fit into the pan and hold the dishes out of the water. The racks can be made to fit any piece of china. The compartment for silver is made of poultry netting or it can be made of screen wire or a tin can with holes in the bottom. After the dishes are washed they are stacked in racks and scalded with boiling rinse water. The pan catches the drip and the dishes dry clean and lintless. If the drainer is used on the drain board of a sink a small hole can be made in the pan to let the drip drain immediately into the sink. The wire racks can easily be removed so that the pan can be used for other purposes. An extra pan need not be purchased if one of the correct size is used in baking bread. This rack can be used for draining small pans and pots after the dishes are removed; however, it is a good plan just to set the racks with the dishes in it to one side and cover with a clean cloth until they are needed again.

b. Silver.

Equipment:

* Farm Home Conveniences, Hodge J. Reece, Farmers' Bulletin No. 927.

Silver ware, enamel kettle and aluminum plate or aluminum kettle, tablespoon of soda and tablespoon of salt, and dish towels.

Discussion:

Silver is something every house wife enjoys having, especially when company is expected. Too often, silver is just used for company and then stored away because housewives are afraid they will spoil their silver ware. Nothing is better for good silverware than the correct care and usage each day. Silverware should not be allowed to remain dirty as this will cause it to tarnish easily. The tarnish may be due to other things too. This tarnish on silver is silver sulphide and may be gotten from the sulphur compounds in the air where coal and gas are burned, or in many foods, in wool in rubber and in some bleached and dyed materials. Dryness prevents tarnish so camphor may be put into the silver case to absorb the moisture.

Procedure:

Silver may be cleaned by using frictional agents or by electrolysis. The frictional materials used are fine whiting, rough and commercial pastes and powders. The powder is made into a paste with water, applied to the silver, allowed to dry, and then rubbed off with a soft cloth, then the silver is washed in warm soap suds, rinsed and dried. To clean silver by

the electrolysis method, put water in enamel vessel, add 1 teaspoon of soda and one teaspoon of salt for each quart of water. Put in aluminum plate and silverware, having silver ware covered with water, and boil. When the tarnish has disappeared from the silver remove, washin soapy water, rinse and dry. An aluminum kettle may be used in place of enamel kettle and aluminum plates if the aluminum kettle is bright, but the process will color the aluminum kettle. Silver cleaned by this method will not have the luster that is given it by the frictional method but if the silver is rubbed a little with a dry cloth it may be made bright. Silver may be cleaned by scouring with baking soda but there is much more work to this method and the silver might be scratched in this way. Silver should be kept clean and scalded when it is washed and there will be little trouble from tarnish.

c. Cooking utensils.

Equipment:

Aluminum stewer, enameled ware stewer, iron skillet, tin pie pan, steel wash grade 00 scourer and an alkali, as lye a and vinegar.

Discussion:

The cooking utensils should receive the same care as the dishes. Too often, we are persuaded to slight our cooking utensils because they come last the water is pretty well soiled and we are tired. This should never be done. We all take pride

in clean stewers and pans and the way to have them clean is to give them proper care each day. If the dishes soil the water, get new water because the pans receive the hardest ware and deserve the best care. Wash them in clean soapy water and scald each time.

Sometimes our pans have black on the bottoms but that is not the fault of the pan but of the stove. If the stove has proper care, there will not be soot on the pans. So, go to the root of the evil and clean up the stove.

Processdure:

Suppose our aluminum pans do get stained on the inside and bleached on the outside. What could we do to remove the stain? There are several ways of cleaning aluminum. We can clean it by using a weak acid such as vinegar or dilute oxalic acid and rubbing the pans. It may also be cleaned by scrubbing it with whiting and then it can be cleaned by scrubbing it with wheel wool grade 00. Be sure to get grade00 for the heavy steel will scratch the surface. When steel wool isused no powder is necessary only water and steel wool. They make the vessels look new and fresh.

Caution:

Never use alkali on aluminum as it will discolor it. We have some enameled ware vessels also and they are badly stained. How can they be cleaned? Our mothers once took them to the ash pile from which they came back nice and clean. We could do that also

also but our ash piles have either disappeared or they are coal ashes which are not so good for securing purposes as the wood ones were, so we must find some new methods. Enameled ware may be cleaned by scrubbing with a scourer but the simplest quickest way of cleaning it is to boil it about fifteen or twenty minutes in a solution of an alkali. An alkali cannot be used for aluminum but is good for enameled ware. The one alkali that most of us have in our homes is lye of which a weak solution can be used. A teaspoonful to a dish pan of water is sufficient. Soda may be used also in cleaning enameled ware. If food sticks to the stewer do not scrape but boil for a few minutes with a little soda and wash them in hot soapy water, rinse, and dry thoroughly. Do not use acid for cleaning enameled ware.

Our skillets are black and they are neither aluminum nor enameled ware so what shall we use for cleaning them? The easiest way of cleaning such ware is by using steel wool and some scourer. Rub on inside and out until the stain and black are gone. Wash in warm soapy water and scald. There is no reason for our skillets being black and unsightly if we wash and scald them and use this method of cleaning.

Tin utensils for ordinary care, should be washed in hot soapy water, rinsed in hot clear water and dried thoroughly. A tin utensil that has food dried on it should be covered with a weak soda solution, heated for a few minutes and then washed. Scraping scratches tin and may expose the iron or steel surface underneath

which may rust. Tin may be cleaned by using a fine scourer.

There is one point we must not forget and that is the cleaning of the utensils around the handles and under the rims. This sometimes seems rather difficult but is no trouble at all if we use a brush. A simple brush can be purchased in almost all small towns and at little cost. Abrush is almost indespinsible in washing dishes, utensils and milk pails.

Reminder:

Always scald cooking utensils.

Never use alkali on aluminum.

Never use acids on tin or enameled ware.

d. Stoves.

Equipment:

Three soft clothes, can of stove polish, pan, fine whiting, soap, water, brush, washing soda, heating stove, coal range and kerosene stove.

Discussion:

Stove cleaning is one of the most dreaded jobs of all house work. There is so much soot to deal with and the polishing of the coal and wood stoves is distastful but with a little system in our work and good methods of cleaning we can make this work much more pleasant.

Procedure:

First, we will take up the cleaning and polishing of a

wood or coal heating stove. The outside of allstoves should be wiped frequently with a cloth or soft paper. Before polishing our stove we must make sure it is clean, so we will wipe it off with a cloth that has been moistened with kerosene. Follow this with a dry cloth and polish our stove while it is slightly warm, as polishes are made with inflammable material, such as turpentine. The stove should be covered with a very thin coat of blacking and rubbed briskly and thoroughly with a dry brush. If the blacking is put on in a thin coat and thoroughly rubbed afterwards it will not rub off on things.

Second, we will take the cleaning of a wood or coal range. Cook stoves receive hard use and the polish soon wears off. If we polish our range it must be done rather often, and this takes up so much time that we ask if there is some other way of having a nice looking range without this frequent polishing. Yes, a range can be kept in good condition with the right kind of care without polish. Never allow things to dry or harden that are spilled on the stove but remove them immediately. Remove grease spots with warm soap suds and wipe stove after each meal with a dry cloth. The rubbing with kerosene should be done when the stove is slightly warm but not hot.

The nickel on any stove should be washed frequently with hot soapy water and dried with a soft cloth. Whiting or some other fine scourer is used to brighten the nickel. If the plating is

knocked off it must be replaced to have its original appearance.

Now we will consider the methods of cleaning an oil stove. An oil stove should receive the same daily care as a range but the real cleaning is somewhat different. The wicks should be free from char. They should be wiped off at least once a day. The stove should receive a special cleaning about once a month. In this special cleaning, the burners should be removed, brushed, placed in a large pan and boiled in water to which washing soda has been added in the proportion of one-half pound of soda to one gallon of water. They should then be rinsed brushed and wiped with a soft cloth, fitted back in the stove and dried thoroughly by lighting fire.

The pipe should have the cap removed and be drained to remove all settlings from the oil. The stove should be cleaned thoroughly with a cloth dampened in kerosene and dried by rubbing with a soft cloth. Stoves may be painted by using black enamel stove paint, and if allowed to dry thoroughly the paint will remain for several months and the stove will be much more easily cleaned.

Oil stoves of all stoves must be kept clean because if they become dirty an explosion nartually follows.

e. Sinks and plumbing.

Equipment:

Washing soda, caustic polish, whiting, kerosene, oxalic acid, and hydrochloric acid.

Discussion:

Drain pipes should never be covered as they will not receive the proper care if they can not be seen. If they freeze or become stopped up with something the trouble cannot be remedied without much extra work. They can be painted white and kept clean and they will not give a bad appearance in any room.

Kitchen sinks are very useful and a pleasure to every housewife but they can become a trouble instead of a pleasure if they are not cared for as they should be. They should be kept very clean and all water going through the sink should run through a sieve to remove all solid particles. No grease should be allowed to get into the pipe as the grease is brighter than the water and remains in the trap.

Procedure:

Suppose grease and other things should accumulate in the pipe, washing soda in the proportion of one part soda to twelve parts water will usually remove it. If this is not sufficient caustic potash, one pound to two quarts water may be poured through the pipe but it should not be allowed to touch the procelain lined sink as it will remove the glaze. It is also poisonous. Caustic soda should not be used as it will unite with the grease forming a hard soap which is difficult to remove from the pipe.

Fine scourers may be used on all fixtures. For porcelain and enameled iron fixtures, kerosene and whiting are especially good; the kerosene cuts the grease, and the whiting supplies the abrasion. The scourer should not be too coarse as it removes the glaze leaving the fixtures hard to clean. Iron rust may be removed from the sink and pipes with oxalic and solution, which is

poisonous and must be washed off. The lime deposit may be removed with hydrochloric acid. Pour a dilute solution in the sink; let stand several hours or until the lime deposit begins to come off. Then add more water to bowl and flush out several times, for it will injure the porcelain if left on it. It is very poisonous and must be used with great care. These extreme measures are very seldom necessary if the plumbing fixtures receive proper care each day.

Demonstration on Kitchen Equipment.

Requirements:

1. Use dish drainer and scald dishes each time they are washed.
2. Wash and scald silver after each usage.
3. Scald utensils and clean around handle with brush.
4. Clean stoves twice a week with cloth dampened in kerosene, and give oil stove thorough cleaning once a month.
5. Clean sink and drain board after each meal.

Literature:

"House cleaning made easier", Farmer's Bulletin 1180.

Report

Number of days dishes drained dry_____
Number of times silver cleaned _____
Number of days utensils scalded_____
Number of times stoves cleaned_____
Number of days sink cleaned_____
Have the use of these methods of cleaning in the kitchen made your kitchen more sanitary and comfortable to work in?_____

Illustrative Demonstration on Good Storage Places.

a. Refrigerators.

Equipment:

Refrigerator, soap and water, dish pan and dish towels.

Discussion:

A refrigerator is a convenience that every home would really enjoy and which should be placed in our homes so far as possible. With the proper care, the refrigerator is the nicest place we can think of for storage of food. The food can be kept at a temperature that bacteria do not enjoy and they will not grow so well in a refrigerator. Most bacteria like a temperature of from 60 degrees F. to 70 degree F. for the best growth and a good refrigerator will keep the temperature about 40 degree F. However, some bacteria and molds grow at this low temperature, and only with proper care of the food and refrigerator, can we hope to keep the refrigerator free of intruders.

* So far as possible, refrigerators should be kept clean by preventive care. Ice should be washed before it is put into the ice compartment. Food should be put into the refrigerator in clean dishes and should never be put in hot. Anything spilled in refrigerators should be wiped up immediately. The contents of the refrigerator should be inspected often to see no spoiled food is left in it. Small amounts of food in dishes should be put in clean, small dishes to save the room of the larger dish. Foods, with strong odors should always be put above the milk and butter if put in at all.

Procedure:

* House Cleaning Made Easier, Sarah J. MacLeod, Farmers' Bulletin No. 1180

About once a week and at a time when the refrigerator contains only a little ice, it should be thoroughly cleaned. The ice and all the food should be removed. The racks should be taken out, washed in hot water containing soap or soda, rinsed and wiped dry. If possible the drain pipe should be removed, scrubbed in side with a long handled spiral brush or swab, and scalded. If the pipe is not removable, it should , never the less, be thoroughly cleaned out, for it may contain not only solid matter from the melting ice but also slime formed by the organisms that thrive in such a dark, cool, moist situation. The small pipe in the drain pipe should also be cleaned, and the drain pan should be washed and scalded. The inside of the refrigerator should be washed with water containing soap or soda, rinsed and dried.

So called iceless refrigerators should be cleaned daily. The shelves should be washed and sunned and the pans should be emptied and washed. Two sets of curtains should be provided so that each can be washed, and sunned every other week.

The outside of the refrigerator should be kept clean also, and only clean things be put on the top of it. The refrigerator should be kept in a sanitary place, not on a dirty back porch., for the back porch should be clean and orderly at all times. There should be nothing left on porch to attract flies to the back door.

The rocks may be sunned as well as washed and aired, and when buying a new refrigerator always buy one with a drain pipe that can be removed and washed, as they are very difficult to clean in the refrigerator.

b. Pantry and Food Safes.

Equipment:

Wood containers and quart can of white paint.

Discussion:

Food safes should be kept orderly and very clean, never allowing food to dry in the safe. Bread box should receive special care as one small piece of moldy bread can grow enough mold to spoil the entire content in a very short time. The pantry should be kept in orderly condition, everything in its place and that place the most convenient place, all food in pantry should be put in containers that will protect it from mice, ants and flies. When fresh fruits or vegetables are bought from the market they should be washed and wiped with a dry cloth and put into some kind of container. They should never be left in paper sacks as it is unsightly and furnishes little protection from animals insects and bacteria. Meat bought from market should be wiped with cloth or soft paper and put in cool, clean place.

All staple groceries should be put in container. Painted tin containers are nice. They are cheap and light, but moisture causes them to rust and the contents cannot be seen. They are nice for some things. Crockery containers are good looking and easily cleaned, but are breakable. A set of uniform size, painted the same color is very attractive. Glass is the most sanitary material for food containers. These containers can be made out of any kind of glass jars, and are nice because they show the contents. Containers for food bought in large quantities can be made of wood, painted and kept in a dry place and they serve nicely. A tin cracker box or large peanut butter can makes a good bread box. A small, clean barrel or

good box makes a nice flour bin and saves the mess that goes with using flour from a sack.

Procedure:

The ladies who attend the demonstration will be asked to bring new empty cans with them, and the lady in the home where the demonstration is being given will be asked to furnish empty fruit jars, bread boxes, and flour containers. The specialist will have the paint and brush.

All the food in the pantry should be placed on a table in the kitchen. Then the pantry should be cleaned thoroughly. Each shelf should be gone over with soap and water, rinsed and dried. The walls should be dusted and the floor cleaned. The food containers should be chosen for each article, the glass containers washed and sterilized. The other containers should be cleaned and gone over with white paint, when the paint on the containers is dry they are filled with the foods and put in pantry in orderly condition. Arrange them for convenience sake first, and then remember to make the arrangement as artistic as possible. When the pantry is finished, there should be no exposed foods, material or paper sack in pantry. Remember, in arranging pantry, to have as few things on the floor to be moved and swept under as possible. Also remember that this arrangement is not just for one day, but pantry should be kept in this condition every day in the year.

If food is kept in a cabinet instead of a pantry, it can be given the same kind of bath and dressing. We shall enjoy working in a well planned, good looking pantry. Let us try it.

c. Cellars.

Equipment:

Well made cellar, white wash, spray pump.

Discussion:

The cellar is often but a dark, damp hole, so damp that visible moisture is usually present on its walls, and so poorly windowed and ventilated that it is musty smelling. It is quite common for cellars to be so dark that one has to find things "by the feel" instead of sight. If work is done in the cellar, (skimming milk, cutting meat) the materials must be carried close to the window. The dirt floors, the moldy boards for walking, and the musty shelves and benches are doubtless familiar to all. Many a person has grown to maturity without even seeing a cellar that had a cement floor or with two windows placed to insure cross ventilation.

It takes an undue amount of a housekeepers' time to be constantly dragging boards, benches and shelves out into the sun to keep things fresh and clean. The cellar ought to be as easy to care for as any other room in the house. Usually it is so unattractive a task that the annual spring cleaning and white washing have a "hated deed done" as their incentive.

White washing need not be made a distasteful task if one uses a spray pump. An old tub or barrel can be kept for mixing purposes, and with a tin spray pump costing but $.60 to $.90 the lime can be sprayed on over the walls. Lime is probably the only convenient deodorizer, as it also covers the old surfaces with a fairly efficient disinfectant.

The cellar should be a storage place for food, as canned food, fresh vegetables and fruit should be in as good condition as any pantry. Let us care for the cellar first and then take care of the living room, because our food is so important. Oftimes a musty cellar is ~~surrounded~~ infested with bacteria, molds and mice.

Procedure:

Meet the ladies of the community in some well constructed cellar. Score cellar according to score card outlined. Note defects in roof, walls, floor, number of openningg, and door. Arrange lighting, and ventilation as nearly as possible to the requirements of score card. Screen openings and put cellar in orderly condition. Score cellar again and compare with first scoring. Point out the differences in the two scorings and the need of better built and kept cellars.

Leave score card with each lady who wishes to become a demonstrator. Leave any other literature on the subject that seems necessary.

Have demonstrator score cellar as it is at present time. Remodel and arrange cellar to meet as many requirements of score card as possible. Score cellar again. Improves cellar so far as she can from time to time.

The cellar is scored once a month, on return of County Agent County Agent encourages demonstrators and gives out more material on the subject to keep the work going. At the end of a six months period the specialist returns. The cellars are given a final scoring and the cellar having the highest number of points is chosen for the model cellar.

To encourage further work in this line, the scoring is continued for the second six months, ~~out~~ at the end of this period the cellars of the different communities are scored and scores averaged. The community having the highest number of points is chosen as the model community on cellars.

The work may be continued if interest is good, but the second year the emphases should be placed on the construction of the cellar, rather than the sanitation. In this way, well built cellars as farm storage rooms are encouraged.

A cellar can be greatly improved with a little white wash. The white wash is made of lime and sprayed on the walls and ceiling with a small pump. It makes the cellar much lighter, removes some of the odor and covers the dirty walls. The cellar can be white washed every six months and this will keep the walls reasonably clean.

Score Card for Cellar.

First Six Months		Perfect Score	1st. Mo.	2nd. Mo.	3rd. Mo.	4th. Mo.
Construction		40				
Roof	8					
Walls	8					
Floor	8					
Windows & Openings	8					
Door	8					
Sanitation		60				
Light	10					
Ventilation	10					
Dryness	10					
Screened Openings	15					
Cleanliness	15					
Second Six Months						
Construction		50				
Roof	10					
Walls	10					
Floor	10					
W indow, Openings	10					
Door	10					
Sanitation		50				
Light	10					
Vehtilation	10					
Dryness	10					
Screened openings	10					
Cleanliness	10					

Construction:

Roof should be water tight and easily cleaned.

Walls should be made of cement or of brick painted or plastered with tin.

Floor should be made of cement with an under drain.

Windows space should be equal 1/10 floor space, and allow for cross ventilation.

Door should be water proof and easily opened.

Sanitation:

Cellar should be light even in furthest corner.

T here should be good cross ventilation.

The cellar should be dry, no dampness whatever.

All openings should be screened and screens in good repair. It should be free from insects and animals.

Cellar should be kept in good condition no decaying material should be tolerated, not dors, rubbish or trash.

Demonstration on Food S torage Places.

Requirements:

1. Clean Refrigerator each week, removing ice, food, and washing with soap and water, rinse and dry.

2. Clean pantry each week, putting all food in sanitary containers and arranging it in orderly manner.

3. Arrange cellar to fill all requirements of score card that is possible, keep cellar in this condition and have it scored once a month by the County Home Demonstration Agent.

REPORT BLANK

Number of cleanings refrigerator has received.

Number of cleanings pantry has received.

Number of food containers in pantry.

Number of paper sacks in pantry.

Grade received on cellar score card.

Illustrative demonstration on Clean Milk.

a. Clean milking place.

Equipment:

A well made barn.

Discussion:

The best way to get rid of an evil is to uproot it so if we want clean milk we must go to the root of the evil. This may be done by milking in a sanitary place. If we have a dirty barn, the bacteria from the surroundings get into the milk and and the bacterial count runs high. Frequently milk contains so much dirt that the specks may be seen as a sediment in the bottom of the bottle or glass. Ordinarily the dirt cannot be seen because the milk has been strained, but the bacteria cannot be strained out. You can see yourself that milk hides the dirt because milk is opaque. Add a teaspoon ful of mud to a quart of milk and mix it. The milk will look as white and clear as before the mud was added. Now strain the quart of milk through a clean white cloth. The brownish or blackish stain proves the presence of dirt. Most of the dirt in milk consists of cow manure; also of particles of dust from the air, bits of straw, hair, dandruff and trash of all kind.

Dirty milk spoils much more quickly than clean milk. It is laden with bacteria and surely is harmful. Every rose has its thorn. Milk also has its dangers. It may convey the germs of typhoid fever; tuberculosis, summer complaint and many other diseases. The Dairyman is interested in the production of clean milk because

it keeps so much longer and brings him a better price when he is ready to sell it. Clean milk is much better than dirty milk, especially when those who handle the milk are especially healthy. Good dairy methods are more important than fancy barns and pedigreed cattle.

Procedure:

Whenever possible, the stable should be on high ground with good, natural drainage. It is important that the air be as free from orders and bacteria as possible so pountry houses, privies, hog sheds, and manure piles which furnish breeding places for flies should be at a distance from the cow stable. The barnyard should be clean and dry.

Clean all cobwebs from ceiling, dirt and dust from walls, manger and surroundings. Whitewash the ceiling and walls. Remove all manure from stable every day. A cement floor with a gutter back of the cows for droppings is very satisfactory. Keep the floor clean. Do not feed while milking asthis causes a dust in the stable. Portect all manure from flies to prevent breeding. Be sure your stables have an abundance of fresh air and sunshine.

b. Clean cows.

Equipment:

Cow, brush, and cloth.

Discussion:

The part of the cow's body that is immediately abovethe milk pail is usually the source of many bacteria in the milk.*

* Production of Clean Milk, Ernest Kelly, Farmers' Bulletin No. 802.

Manure, loose hairs, bedding and other foreign matter carrying great numbers of bacteria drop into the pail during the milking. In fact, samples of fresh cow manure have been known to contain nearly 50,000,000 bacteria per gram.

The best method of prevention is to have the cows clean at milking time. Far more reason exists for the daily grooming of a cow that produces human food, than of the grooming of a horse or washing of an automobile. Custom says,"keep the horse and car clean and allow the cow to be dirty."

Procedure:

Give the cow a thorough brushing before each milking and rub udder and teats with a damp cloth. If they are badly soiled wash them. Be sure no dust or manure is hanging to the sides of the cows. The long hairs on the udder can be cut off to be out of the way. Cleaning cows has been found to have a marked effect in lowering the bacterial count. In an experiment in which open sterilised milk pails were used, samples of fresh milk from dirty cows had twelve times the number of bacteria that were found in the milk from clean cows under the same conditions.

Cows should not only have the outside of their bodies cleaned but they should have clean drinking water. Contamination of the drinking water may lead to typhoid fever. All the water on the farm, even that to which only the cattle have access should be above suspicion as to its purity. If cows wade in polluted water,

disease bacteria may adhere to their bodies and later fall into the milk pails.

Clean water is an essential to clean milk but not the only essential. Cows must have wholesome food to produce wholesome milk. The food should be nurishing and clean. The food should be free from plants that have a taste or oder in the milk and butter. This taste and odor is usually caused by some bacteria that live on certain plants and the cows should not be allowed to eat those plants.

Last, but not least, all milk cows must be healthy cows. Tuberculosis probably is the most dangerous and wide spread disease of cattle that endanger the safety of the milk. Tuberculosis is contagious, spreading from one cow to another, endangering the health of the cow and killing many calves. The cow is believed to be the source of tuberculosis in children as most cases of the disease are of the bones, joints, and digestive tract. Our cows should be tested at least once a year for tuberculosis and if any are found with the disease, they should be spearated from the herd and the barns disinfected. No shiny, ropy, watery, stringy and colored milk should be used. Bacteria cause these abnormal conditions and we don't want to use the bacteria.

e. Clean milker.

Equipment:

Healthy person, clean milking suit, and covered milk pail.

Discussion:

Those who handle milk should be healthy. Some communicable diseases which do not originate with the cows are carried by milk. The bacteria causing these diseases may drop into the milk from hi

the milker. Many people are typhoid carriers who never have the disease themselves. Typhoid epidemics have been traced to one milker in a large dairy near a city and also have been traced to cooks in large places. The milker should be clean, healthy and not a carrier of disease.

Procedure:

The person doing the milking should have a clean suit, preferably white, that is worn at no time except while he is milking. This shit should be kept clean and fresh. A cap should be worn to protect the milk from hairs and the hands should be clean. They should be washed in clean water just before milking. The old custom of wetting the teats in the milk from the milk pail is very unsanitary and should never never be done.

A small top milk pail should be used to protect the milk as far as possible from the bacteria falling into it from the air. The size of the top of the milk pail has so much influence on the number of bacteria in the milk. If we are accustomed to placing a large open pail under the cow and milking, let's change our method and get a covered milk pail and protect our milk, one of the foods for the entire family, from the bacteria that might fall into it in the open pail. An ideal milker is a strong healthy person dressed in a clean white suit and cap, with clean hands and a sterilized covered milk pail. All our milkers can be ideal if we only think so.

d. Clean utensils.

Equipment:

Utensils, dish pan, sterilizer, soap, and water.

Discussion:

One of the essentials of clean milk is clean utensils. A clean utensil is one free from bacteria and dirt. Dirty utensils are often the cause of contamination of milk. It was found in one experiment with sterilized utensils and utensils that were not sterilized that the bacterial count in the utensils that were not sterilized was twelve times that of the sterilized utensils.

Besides adding large numbers of bacteria to the milk, unsterilized utensils usually add undesirable types of bacteria. Such types are the ones that cause milk to putrefy and undergo changes that make it dangerous. Furthermore, if utensils have been washed in contaminated water and not sterilized, disease bacteria may be introduced into the milk. Cans which have not been properly sterilized and dried give off foul odors after having stood for awhile. A separator not thoroughly washed and sterilized after each using has, what most people, know, the separator odor. This is a good indication that bacteria have charged the milk left in the separator until it gives off this odor.

Milk sours much more rapidly kept in unsterilized pails than in sterilized pails and the abnormal condition of milk is often caused by the bacteria that grow in the unsterilized pails form

from one day to another. If we want our milk to stay sweet and our butter to have a good texture and flavor we must sterilize our milk utensils.

Procedure:

There are three simple processes we should fallow in caring for our milk. First, rinse the utensils in cold water to remove the milk as the hot water causes the protein of the milk to coogulate and it is difficult to remove. Second, wash utensils thoroughly in hot soap suds to remove all dirt as sterilization can not take the place of washing. Third, sterilize all utensils in steam at least 205 degrees F. for five minutes.

A simple steam sterilizer can be made by following directions given in Farmers' Bulletin No. 748. I have one of those sterilizers and will use it in the sterilization of the utensils. The steam must be at 205 deagres F. or above to do efficient work. The cream cans and milk pails are sterilized by placing them inverted over the steam outlet and allowing them to remain there for five minutes. Remove, shake out the water and set up right on the floor. The can or pail should be thewoughly dry in three or four minutes. If they are not dry in that length of time the steam was not hot enough.

The can covers separator parts and strainer cloths are sterilized in the galvanized iron bowl on the sterilizer. Place them in the bowl, cover with the lid and let remain there five minutes. All utensils should now be put in clean box until they are used again.

In washing utensils see that around all handles are cleaned

thoroughly with a brush, and use strain cloths that can be easily cleaned and not strainers that harbor large numbers of bacteria.

On quiet nice days, utensils should be summed and aired.

f. Clean storage place.

Equipment: Milk house, and some method of cooling milk.

Discussion:

After our milk has been milked under sanitary conditions in sanitary milk pails, from a clean cow, by a clean healthy milker, the next question is where will we store our milk, in a milk house, in the shade of the house, in the pantry or in the cellar? Let us find the requirements of a sanitary storage place. Then we can decide which place will fill the requirements. A sanitary storage place for milk must be free from dust, free from odors, free from flies, not damp and musty, at a temperature below 50 degrees F. With good ventilation and plenty of sunlight. All cellar could not fill the requirements, all pantries could not, neither could all milk houses.

Prodedure:

Let us examine a milk house and see how many of these requirments it can fill. The milk house should have smooth walls and ceiling that are easily cleaned, and they should be gone over and cleaned at least twice a month. The floor should be easily cleaned. A cement floor with a drain for carrying away the water is very good. It should be cleaned every day. There should be two rooms in the milk house, one for washing utensils and one for keeping milk. No food or anything that gives off odors shouldbe

kept in the milk house. There should be no dust in the air. The milk house should be screened and free from flies and mice. There should be openings on two sides of the milk house to insure sunlight and cross ventilation.

As soon as the milk is milked it should be carried to the milk house, not left in the barn to catch dirt and cooled quickly to 50 degrees F., and held at that temperature or below at all times. Many bacteria grow faster at 70 degrees F. than at any other temperature and at 50 degrees F. the growth is very much retarded. Milk makes a good medium for bacteria. It should be one of our leading foods so let us protect it in every way possible.

We have a score card for clean milk and we can score our methods for milking and handling milk for four months with this score card and compare our improved methods with our old methods and see if we are improving the quality of our milk.

Those wishing to become demonstrators in the production of clean milk are given this score card. They should put it up in their milk house or some place where it can be seen each day. Fill all requirements of the score card as far as possible and at the end of each month the county demonstrator will aid the person in scoring their methods and comparing scores. Of course, we wish very much to raise our score each month until we are able to have a perfect score.

Contests will be arranged for between homes and communities to keep up interest in the work until the principles are firmly

fixed in the minds of the people.

The score card will be the report blank for this demonstration.

Literature:

Farmer's Bulletins Numbers: 748, 413, 490, 602, 363, 473, 480, 540, 689, and 1214.

Score card for clean milk.

	Perfect score	1st. no.	2nd no.	3rd. no.	4th no.
Clean milking place.	15				
1. No manure.	3				
2. No dust.	3				
3. No feed.	3				
4. No odors.	2				
5. No flies.	4				
Clean Cows.	20				
1. Brushed cow.	4				
2. Washed udder and teats	4				
3. Healthy cow.	4				
4. Wholesome food.	4				
5. Clean water.	4				
Clean milkers.	15				
1. Clean clothing.	5				
2. Clean hands.	5				
3. No carrier of disease	5				
Clean utensils.	20				
1. Small top pails.	6				
2. Rinsed in cold water	4				
3. Washed in hot soap suds.	5				
4. Sterilized in steam 250 F. for 5 minutes. or boiled 3 min.	5				
Clean separator.	15				
1. Washed after each milking	5.				
2. Sterilized after each milking.	5				
3. Sunned and aired each day.	5				
Clean storage Place.	15				
1. Free from dust.	2				
2. Free from odors.	2				
3. Free from flies.	3				
4. Below 50 degrees F.	3				
5. Good ventilation.	2				
6. plenty of sunlight.	3				

Fig. 9.—Cleaning off the cows in a modern dairy barn. A clean cow is the first step in the production of clean milk.

Fig. 10.—Sterilizing dairy utensils with a simple steam sterilizer.

BPR-RE 1384

[redacted] 9.—One of many farms lacking the simplest sanitary convenience.

Illustrative Demonstration of yard and surroundings.

Equipment:

A Farm Home.

Discussion:

The prime interest of a people is to protect themselves against enemies that would destroy them or make them helpless. Disease is the chief enemy of the race. There is a class of diseases that carries people away, year after year, and yet nothing is said about these man killers and very little action taken to prevent them. This class of disease can be handled by preventive measures, and we want to name this class of diseases the Filth Borne Diseases. The principal members of this class are typhoid fever, dysentery, and diarrhoea. By safe guarding drinking water and saftely disposing of human excreta, these diseases can be avoided. Hookworm, which results from soil pollution, may also be prevented if the rules of sanitation are carefully observed. Safe disposal of excreta will not only conquer hookworm, but will cause the end of other parasitical diseases of the intestines.

Water that is necessary to health must be free from all disease producing agents. Only from the bodies of human beings come those disease germs, living poisons, that produce the illnesses of the Filth Borne Class. These germs which multiply rapidly in the human body do not live long outside of the body and do not originate spontaneously in nature. If excreta is saftely disposed

of, if the germs are permitted to die before they can get into the bodies of human beings they are harmless.

It is, therefore, particularly important that water sources should be protected from pollution of this character. If we keep the waste products of human bodies so they cannot reach our water supplies, we keep our water supplies safe from disease germs.

A sanitary water supply is essential to every household and should be a prime consideration in locating and building a home. Most of the water used in our state for domestic purposes is pumped from ground water supplies. Water in wells even of considerable depth may be polluted through seepage; also flood waters, filth and dust maay get into open or carelessly closed wells. Water may also become contaminated after it has been pumped into tanks.

The well should be located on high ground. If this is not possible, the area immediately around the well should be filled in with good soil. The surface around a well should slope away from the well, not toward it. Where necessary, the well should be protected by embankments or dams against flood waters. Contam i-nation through seepage occurs down in the well shd so it is not easily detected. Often, one is not aware of it until sickness occurs in the home. On this account, the greatest care should be exercised in the location of wells with reference to objects that may contaminate the water. These include cesspools, vaults for the disposal of sewage, sewer pipe lines and open sewer ditches, barnyards, hog yards, poultry yards, stockyards, and manure

heaps. Likewise pools or ponds of stagnant water should not be near wells for such water may contain disease germs. The least distance wells should be from such objects is one hundred feet and one hundred and fifty is much better. Even then the ground maybecome so saturated with impurities from seepage water as to act no longer as a good filter.

If there is running water in the house and a tank is the source, it should always be covered to prevent things falling tinto it and to prevent the growth of small plants that make a green scum and cause settlings in the water.

A definite obligation of any householder to his family and community is that he shall provide means of the disposal of the human body's waste in such a way that it shall not have access to the surface of the ground; that neigher flies, other insects, animals, nor fouls shall have access to such waste; that there can be no communication between this waste and water supplies. Upon the fulfillment of this obligation depends the control of all soil born diseases. Typhoid fever and other diseases of this class are not "caught" They are transferred from person to person either directly or more frequently by means of some such carrier as the fly or polluted water. Every case of typhoid fever means that the discharges of some person with the germs of typhoid fever in his body have been transmitted to the other persons. It is therefore a short circuit between two bodies, one with the seed of disease in his body and the other previously free of such seed. Logically, the thing to do is to interrupt this short circuit,

the most convenient point being at the fountain head of infection by so confining all human waste that these seed may not reach healthy bodies.

All outbuildings should be well constructed with a view of being easily kept clean, airy and dry. Filthy stables and hog houses furnish breeding places for flies and flies, in turn transplant filth to food and drink. What contrast some homes kept perhaps equally clean as to the residence, but the one with clean outbuildings and the other with filthy outbuilding, furnish in the number and nuisance of flies.

Stables should be provided with concrete floors that may be easily kept clean and dry, and especially should the cow stable be so constructed that it may be kept very clean, makil is a good soil for disease producing bacteria and one typhoid germ in fresh milk at night may mean many millions in the morning. In addition, it may mean several cases of typhoid fever in the home or an epidemic in the neighborhood if the milk is sold to others. All stables should be equipped with some sanitary means of manure storage so that fly breeding may re reduced to minimum.

Cities often find their garbage problem to be one that is very difficult to handle. The decaying material draws and breeds flies, feeds mice, cats and dogs and makes a very pleasant surrounding for bacteria. In the city the garbage question is a community problem and must be solved by the city as a whole but in the rural district the disposal of garbage is left up to the individual family. What

should the individual family do with the garbage? This problem is easily solved if a few simple rules are followed in disposing of the waste. First, garbage must be disposed with immediately; that means each day. It must not be left longer than three days, for if it is, it becomes a breeding place for flies. Second, it must not be exposed to flies, cats and dogs but be kept in a container that has a fly proof lid. Waste should never be thrown out the back door or in the back yard as it draws flies so badly. Neigher should waste water be thrown in the back yard.

The question of the disposal of the garbage is usually very simple on the farm as the pigs ask for it several times each day and if we only listen to the advice of the pigs the flies will never breed in our garbage. Never put the garbage in an open barrell nor always dip from the top, leaving some in the bottom of the barrel all the time as this is one of the finest nest flies have for rearing their young.

The sanitation of the back yard must not be forgotten. Our surroundings would not be what they should be if our backyard were covered with underbrush papers, rubbish, tincans full of stagnate water and other things that go to make up a favorable surroundings for our enemies, the bacteria. Let us never neglect our yard and back porch.

Procedure:

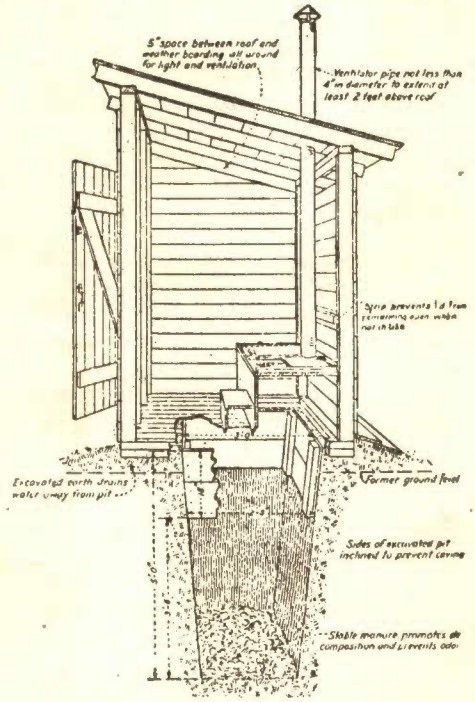
Look into the home decided on for this illustration and go over all the surroundings and yard. Score the toilet, according to score card furnished, painting out good and bad points in the privy. Also score the yard according to the score card furnished. Point out the insanitary conditions.

There are furnished also score cards for the water supply and garbage, these will be scored too.

After each thing is scored, they will all be gone over and remodeled as far as possible to fit the requirements of the score card and then scored again, differences discussed and points of sanitation pointed out. Those wishing to enroll in this demonstration will be given one each of the score cards and they will, with the aid of the county Home Demonstration Agent score their homes once each month for six months. The first and final scores will be compared. This demonstration will draft the support of the entire family and each will have a part in it. The report of this demonstration will be the score cards filled out and turned in.

PREVENTION.

Hookworm disease can be prevented by keeping the soil



PIT PRIVY DESIGN
FOR USE IN
RURAL DISTRICTS

free from pollution with human filth. To do this good privies must be built and used so that the ground will not become infected from bowel discharges.

Outdoor Toilet Score Card.

		Perfect Score	First month	Second Month	Third Month	Fourth Month
Location.		20				
Construction.		20				
Roof.	4					
Wall.	4					
Floor.	4					
Foundation.	4					
Windows, openings, door.	4					
Equipment.		20				
Seat covered.	5					
Vault.	15					
Depth. 10.						
Material. 5.						
Sanitation.		40				
Openings screened.	10					
Light and ventilation.	10					
Cleaning-vault.	10					
Use of disinfectants.	10					
		100				

Location:

It should be located at a distance of from 75-100 feet from the house.

It should be located at a distance of from 75-100 feet from the well.

It should be exposed to sunshine that is not under heavy shade trees or inside a dark building.

Construction:

Roof should be rain proof.
Walls should be smoothe, easy to wash and clean.
Floor should be smooth and free from holes and large cracks.
Foundation should be solid (concrete) and any space between base and walls should be screened.

Ventilation--there should be at least one opening besides the door and so placed as to give cross ventilation. There should be a vent leading from vault through the roof.

Equipment:

The seat should be covered and hinged.

The vault should be at least 2½ feet in depth.

The vault should be made of concrete, brick or wood--the concrete vault is much more sanitary than any other kind of vault.

The opening to the vault should be covered and screened.

Sanitation:

All openings, windows and doors should be screened and the screens should be in good repair.

The building should be free from odor.

The vault should be soconstructed that it can be easily opened and cleaned.

The floor and seat should be scrubbed at least once a week and the walls should be brushed occasionally to remove dust.

Some disinfectant should be sprinkled into vault twice weekly (use quick lime, loose dry soil, ashes, or any good disinfectant.)

Safety First: The waste of the vault must not be exposed to flies, mosquitoes, and other carriers of disease such as rats, mice, sparrows, and pigeons.

BACKYARD	Perfect Score	May 1.2.3.4.	June 1.2.3.4.	July 1.2.3.4	August 1.2.3.4
Waste material	50				
Tin cans etc.	15				
Perishable material	15				
Underbrush	10				
Papers, etc.	10				
Animals	20				
Poultry	8k				
Pigs	6				
Dogs	3				
Cats	3				
Arrangement	30				
Outbuildings	9				
Trees	7				
Grass	7				
Flowers	7				

Waste Material:

There should be no tin cans or any vessels to hold rain water in which mosquitoes could breed.

Perishable material should be removed from yard immediately as it will draw flies from other places.

All underbrush should be gathered up, burned or stacked away for future use.

Papers and old clothing should never be allowed to get into the yard but should be burned.

Animals:

Poultry should not be allowed in yard and around the well.

Pigs should never be allowed in yard, around the well or milk house.

Dogs and cats should never be allowed in/around the well or milk house, on the porches or in the cellar. (Let the traps catch the mice. They can be disinfected.)

Arrangement:

Outbuildings should be so arranged as to be convenient and yet seem to belong to each other.

Trees should be arranged so that there will be plenty of sunshine and fresh air in yard. And unbroken lawn usually gives the best appearance and is easily cared for.

Flowers should be so arranged that they may obstruct the view from unpleasant sights.

Sanitary water supply score card.	Perfect Score	1st. mo.	2nd mo.	3rd. mo.	4th mo.
Located on an elevated place.	15				
Protected from seepage.	12				
Protected from surface drainage.	12				
One hundred feet or more from privy, septic tank or cesspool.	15				
Fifty feet or more from stock watering tank and barn.	12				
Fifty feet or more from all buildings sheltering animals.	12				
Curb free from animals or poultry.	12				
Water storage tanks covered.	10				
Total	100				

Garbage Disposal Score Card.					
Protection from all flies and animals.	40				
Immediate disposal.	40				
Disposal in economic manner.	20				
Total	100				

Illustrative Demonstration on The Care of the Sick Room.

a. The Room.

Equipment:

Broom, dust cloth, disinfectant as formalin or phenol, mop, a liquid or dry cleaner for the windows.

Discussion:

The first thing in the care of a sick room is to keep the infected area as small as possible. Keep the patient in one room, and that room as far removed from the rest of the house as possible. There should be no unnecessary furniture in the sick room, and the furniture of the sick room should be plain, simple, easily cleaned and serviceable. The window curtains should be white and easily washed and cleaned. The walls should be plain with no unnecessary pictures. Walls should be easily cleaned. No clothing or bedding except that used in connection with the patient should be in the room.

Procedure:

The windows should be dusted often and gone over once a week with a cleaner. T his cleaner can be water, to which washing soda, borax, ammonia, kerosene, gasolene or alcohol has been added. In window cleaning, good results depend quite as much upon the application as upon the cleaner it self. The best general method is to dip a cloth in the liquid and ring it as dry as possible; then, to wash the glass with this cloth, using even ~~cur~~ lapping strokes, and dry it by rubbing briskly with paper, cloth or chamois. The window curtains should be kept clean, dusted and in order. They should be made of plain white material and not elaborate.

The walls should be painted or covered with oiled paper as far

as possible. A papered wall is not so good as it is hard to clean. The walls should be gone over with a brush or cloth on a broom to remove all dust.

The furniture should be kept very clean. It should never be dusted with a dry cloth or feather duster, but with an oiled or moistened cloth. The furniture should be gone over each morning.

The floor should be finished in such a way that it is easily cleaned and should be mopped with a mop rung from a solution of a disinfectant each morning. If the floor needs sweeping, it must always be done with a dampened broom. Anything spilled on the floor should be mopped up immediately with a mop dampened in a disinfectant.

There must not be flies in the room.

b. Demonstration on Sanitary Bed Making.

Discussion:

Beds of all household equipment should be kept clean , aired and orderly. The greatest care should be given to beds, and as far as possible, single beds should be used in our houses. In buying our beds there are several points to consider. First an enameled iron bed is preferable to a wooden one. They are much more easily cleaned, show the dirt worse and will be kept cleaner. They are also more easily moved around. Our beds should be simple and durable; and iron and brass bed is very durable. An ideal bed would be a single enameled iron bed.

The springs should be made of double woven wire, stretched tight. Much of the comfort of the bed depends upon the kinds of the

spring. It is more economical to purchase good springs and care for them than to get the poor springs and have to replace them rather often and yet never have a comfortable bed.

The best mattress is made of hair, or felt, but a good cotton mattress is very nice. The use of a feather bed in the sick room should be condemned, as it packs in lumps, absorbs moisture and odors, retains heat, and is difficult to make under a patient. If a feather bed is used on any bed it must be aired and sunned often, about twice or three times each week, or it will become lumpy and be uncomfortable.

Pillows may be feather or hair, and should be aired often.

After we have aired bed stead, springs, mattress and pillows , to be able to make our bed in a sanitary manner, we should have two sheets, upper and lower, two and three fourths yards long and two yards wide; light, easily laundred counterpane (dimity, unbleached sheeting, bleached sheeting, seersucker); simple durable pillow cases and white quilted mattress pad.

Procedure:

1. Place quilted pad over mattress.

2. Place bottom sheet over mattress pad, allowing from 14 to 16 inches at the top to be folded under mattress. The mattress should be well covered at foot.

3. Tuck bottom sheet under mattress as far as it will reach at either side. Make sure there are no wrinkles in sheet. Fold the corners back to make a neat finish by using the envelopefold.

4. Place the top sheet on bed with right side down to face right side of bottom sheet.

5. Allow 12 inches at foot of bed to tuck under mattress.

6. Use envellpe corners and tuck top sheet as far under mattress at sides as it will go.

7. The blankets should be placed about 12 inches from the edge of the top of the mattress.

8. Put the counterpane on, allowing about 4 inches above the top of the blankets.

9. Turn top edge of counterpane under blanket, and turn top edge of sheet over counterpane.

10. Put slip onpillows (put pillow on bed or table, not under chin or in mouth) and place pillows on bed.

A bed made in this way is comfortable, orderly and clean. The bedding is well protected from the persons using the bed.

Equipment to be furnished by local dealers for demonstration.

1. Single one three-quarter white enameled bed stead.

2. A set of springs.

3. A good mattress.

4. Two pillows with slips.

Equipment to be furnished by specialist.

1. Mattress pad.

2. 2 sheets

3. 1 blanket

4. Counterpane

c. Patient

Equipment:

Disinfectants, slop jar, large stone jar, wash basin, towels and necessary dishes for patient.

Discussion:

If the rules of sanitation need to be practiced anywhere, it is in the sick room around the patient. Without the proper care of the patient, the disease is carried to the other members of the family, and perhaps to the neighbors. Often, one member gets a disease as typhoid fever and soon every member of the family has the fever. All because the word sanitation was left out of the sick room. The patient should be made as comfortable and happy as possible and as free from pathogenic bacteria as possible. Give the patient a chance to get well and all others a chance to stay well. We get disease germs either through our food, water, air or personal contact. Let us protect the avenues and prevent the spread of diseases.

Procedure:

The patient should have one set of eating utensils that are kept away from the kitchen and milk house. They should be washed and scalded on a back porch or in the sick room after each use by the nurse. They should be put back in the room and never carried into the kitchen until the patient is well and the room and contents have been disinfected. The napkins should be put with the bed linens and treated with them.

A large jar of disinfectant should be made up and kept ready for

use at all times. Sputum can be received in a small can of disinfectant or in paper cups and burned immediately. The disinfectant can be five percent carbolic acid, five percent cresol or four percent formalin.

Urine should be received in an equal volume of five percent chlorinated lime, five percent carbolic acid, five percent cresol or one twentieth its volume of formalin.

Fecal material should be received in a vessel with an equal amount of a disinfectant, mixed and allowed to stand one hour and then disposed of. The same disinfectant can be used that was used with spittle and urine.

The bed linens should be wrapped in a sheet, wet in phenol or five percent cresol, and carried to the laundry room. They should be washed separately, never in connection with other clothing, and boiled twenty minutes to sterilize them.

d. Attendant.

Equipment:

Wash dress, disinfectant.

Discussion:

The home nurse should wear wash dresses that fit neatly and are designed for comfort and freedom. As personal cleanliness is essential for the proper functioning of the skin, the daily bath should not be neglected, no matter what are the demands on her time. Her clothing must be kept scrupulously clean, and changed frequently enough to eliminate the necessity for perfumes and scented toilet powders so offensive to sensitive patients. Her shoes must be of good quality

with the soles wide and heavy enough for protection to her feet, yet light enough for easy walking. It is needless to say that the heels should be low and made of rubber. The feet are more abused than any part of the body and as nursing implies much standing, the pedal extremities deserve to be comfortably shod.

Too much stress cannot be laid on her need for rest and recreation. A sleepy nurse is not a good one; recreation keeps her mind alert. She must be conscientious and have the interest of her patient at heart, of course; but she can not afford to neglect Mother Nature's Laws. Many home nurse has collapsed at the very moment when needed most, after subjection to long anxious, tedious hours of bed side nursing. Walking furnishes the best outdoor exercise. A nurse should keep her hands and nails clean and avoid roughness and chapping which become sources of irritation to the patient, and often lead the road open for infection.

Procedure:

Put on simple clean white dress when entering the sick room; have hair combed neatly and shoes shined. Wash hands with soap and water, then use some antiseptic on hands. Green soap is good and a dilute solution of some disinfectant is also very good. Clean finger nails thoroughly. Be sure to use antiseptic on hands each time after handling the patient. Never go from the sick room to the kitchen to cook for the family without having clean hands and dress not worn in sick room. Also to not handle milk or any food except that for the patient without changing clothes and using antiseptic on hands. Handle as few things in

the other part of the house as possible.

c. Disinfection and Fumigation

Equipment:

Twenty ounces of formaldehyde, 16 2/3 ounces of potassium permanganate, dish pan, long strips of paper, one pound of sulphur and large pan.

Discussion:

The first and all important thought in connection with the disingecting with contageous diseases is to keep the infected area as small as possible. Keep the patient and all that is connected with him in one room and everything out of the room that is not needed for the comfort of the patient. Disinfect every thing possible from the beginning and don't scatter the bacteria all over the house.

* There are many disinfectants we might use but some are far superior to others in their germicidal power and effect they have on furniture and clothing. For the disinfection of a room, formaldehyde is the best one known. It is one of the most powerful germicides. It is not poisonous, does not injure delicate fabrics, paint or metal and is the only known gaseous disinfectant which can be used effectively and safely in households. Carbolic acid is good for disinfecting in a sick room, for spittum, clothing and the like but it is not so good for the disinfection of a room. It is very poisonous and expensive. The cresols and coal tars are very good for disinfecting around the house, yard and barn. They are used for spraying in from

* Some Common Disinfectants, M. Dorset, Farmers' Bulletin No. 926.

a two percent to a five percent solution.

The best remedy for insects in the house such as bed bugs is to fumigate with hydrocyanic-acid gas, but this is so dreadfully poison that it should never be done only by an experienced hand and then with the greatest care. Sulphur can be used in the fumigation of houses for insects. It is not so effective as hydrocyanic acid gas, but it is not so dangerous and is not expensive. Let us use preventive measures as far as possible and protect our homes from the pest instead of trying to rid them of them after they have their hold.

Procedure:

To disinfect a room with formaldehyde gas.

For one thousand cubic feet of space, have twenty ounces of commercial formaldehyde and 16 2/3 ounces of potassium permanganate. First, open all closets and spread all clothing out in the room on chairs and other things and expose the bedding as much as possible. Close all doors and windows except the one for exit. Cut stripe of paper and paste over all cracks. See that all openings and cracks are sealed and that the temperature of the room is at least 70 degrees F. Close all key holes. Place newspapers on the floor in the center of the room for quiet a ways and place two bricks in the center. Put a dish pan on the brick and put the potassium permanganate in the pan. When everything is ready pour the formaldehyde over the potassium permonganate andleave the room quickly. Seal the openning used for exit with a strip of paper on the out side and leave the room closed for at least twelve hours. It

is better to leave it twenty-four hours. After the required time is up, open the room and air thoroughly before using it.

To disinfect a closet or clothes chest, hang the clothes up as much as possible and just put a saucer full of formaldehyde in bottom of the closet and allow it to evaporate. Books can be disinfected in the same way if they are stood with open side down and leaves scattered as much as possible.

To fumigate a room for insects, remove all metals and bright colored things and close all openings. Prepare the dish pan as in the fumigation with formaldehyde and put one pound of sulphur in it for every one thousand feet of space. Put the dish pan ina larger pan to protect the floor from the danger of burning sulphur, and when every thing is ready set the sulphur on fire and close the last opening. Allow the room to remain closed for twenty-four hours, then give it a thorough airing.

Don't forget that fresh air, sunshine, soap and water are the best germicides we have, and are the least expensive. So let us use them in every way possible. Give the window shades and windows a rest. Open them up and flood the house with sunshine, laughter and joy. A twenty minute bath in direct sunlight is death on most bacteria.

n Demonstration

Requirements:

1. Clean room each morning with dampened dust cloth and disinfected mop.

2. Make bed each morning in sanitary manner.

3. Use a disinfectant in all sputum, urine and faeces from the patient.

4. Wrap sheet wet in disinfectant around all clothing taken from the room, and wash clothing by themselves separately.

5. Wash all dishes used by patient separately.

6. Nurse wears simple wash dress and washes her hands in disinfectant each time after handling patient.

7. Keep patient in one room as far removed as possible, and have as few attendants as possible.

Report Blank.

Method of cleaning sick room.

Number of times disinfectant used in sick room.

Number of attendants for each patient.

Number of times bed made in sanitary manner.

Kind of clothing worn by attendant.

Number of times faeces and urine disinfected before being destroyed.

Sanitary School Campaign.

The Sanitation Specialist will hold county meetings in each county. At this meeting the county and Home Demonstration agents, the County Superintendent, Representatives from school boards, leading clubs and as many teachers as possible should be present. The plans for a Sanitary School Campaign will be thoroughly explained and discussed. All the people present will be asked to help in this work.

The County and Home Demonstration Agents, County Superintendent and when possible the Specialist will go to the different districts, explain the contest to the patrons and pupils of the school. Since both are to have part in this contest, convince them of the great need of more sanitation in the rural schools and enroll all schools wishing to enter this contest. The spirit of contest will be talked up between different schools to arouse the interest of every one. Each school entering this campaign becomes a contestant and is given a large score card having the requirements of a sanitary school. The first card will be white; the second card, red, and the third card blue. A new card is put up each month.

The pupils and teachers are responsible for the care or sanitation of the school and the patrons for the construction and repair of the building. Some one might say that the patrons would never repair the building or build Miss Hygiene's House but they will. One of the nicest roads to a man's purse is by way of his little blue eyed girl or boy who comes home each eve-

ning telling why their school scored so low and how they are so anxious for the score to be raised so they will be winners in the contest. The only safe way of educating the public is to educate the coming generation.

Each school is scored each month by the County Agents and people of the district. The school receiving the highest score is given a prize. The funds for this prize are solicited from the leading business men, clubs and those interested in this work. This contest is to last three months and at the end of the third month the winning school will receive a prize, also a prize will be given to the winning township of the county. The cards will be turned in to the County Agents and they with the specialist will average results and award prizes. The contest is to be carried on during the months of March, April and May.

This score card will be given an important place in the school building several days each month and referred to occasionally for its educational value. When this three months contest has closed, each pupil attending the schools partaking in this campaign should have a clear understanding of the principles of Sanitation as applied to rural school. They should have not only the principles thoroughly rooted in their minds but should have that crying need of Sanitation in the rural districts burning in their souls. How Children's diseases sweep like a March sand storm from one child to another because of the common drinking cups, dirty cloak rooms and poor ventilation.

This campaign should be carried on in the second year emphasizing more and more the need of sanitary toilets and the proper amount of window and floor space for each pupil.

A Sanitary School.

1. Location of school.
   (a). A site that is dry and not malarious and an aspect which gives light and cheerfulness.
   (b). The building should be detached so as to obtain an abundance of fresh air and the greatest possible amount of light.

2. Nature of building.
   (a). There should be air space between outer and inner layers of walls.
   (b). Each child should have floor space of 12 square feet.
   (c). Roof should be water tight.
   (d). Walls should be made of material easily cleaned—(never papered).

3. Light.
   (a). *Light should fall over left shoulder of pupils.
   (b). Windows should be provided with shades to shut out direct sunlight.
   (c). There should be one square foot of window glass for each four square feet of floor space.

4. Ventilation.
   (a). Each child requires about 2000 cubic feet of air an hour.
   (b). Each child should have at least 600 cubic feet of air space and the air should be changed at least three times an hour.
   (c). School room should be aired over night and week ends.

5. Heat.
   (a). Relative humidity of air should be 50 per cent.
   (b). Temperature of room should be from 65 to 70 degrees F.
   (c). There should be an even distribution of heat throughout the room.

6. Desk and seats.
   (a). The height of the seat should correspond with the length of the pupils legs below the knees.
   (b). Seat should slope slightly to the back, and back of seat should curve forward.
   (c). Height of desk should be such that neither shoulder of pupil will have to be raised or lowered.
   (d). Desk should slope forward from 10 degrees to 20 degrees and project slightly over edge of seat.

*Home and Community Hygiene, Jean Broodhurst

7. Cloak rooms.
   (a). Cloakrooms should be large and well ventilated (cross ventilation).
   (b). They should receive special care.

8. Floors.
   (a). Floors should be oiled or so treated to prevent dust in sweeping.
   (b). Broom should be dampened for sweeping.
   (c). Sweeping should never be done in morning before school.

9. Furniture.
   (a). Furniture should be kept in best of condition and children taught to respect furniture.
   (b). A damp cloth should be used in dusting (never a feather duster).
   (c). Furniture should be polished once a month. (Take 8 ounces of boiled Linseed oil, six ounces of turpentine, and two ounces of vinegar. Shake in pint bottles, makes polish).

10

10. Toilets.
   (a). Outdoor toilet.
      1. Should be up to the requirements of a sanitary out door toilet
      2. Should be scrubbed daily.
      3. A disinfectant should be put in vault daily.
   (b). Indoor toilet.
      1. Toilet rooms should be well ventilated and windows screened.
      2. Toilets should be kept clean and well flushed.
      3. They should be deodorized and disinfected daily.

11. Garbage.
   (a). Garbage should be removed and destroyed as soon as the meal is finished, it should never be left in school room, during the afternoon.
   (b). Garbage should not be thrown on school ground.
   (c). Openings should be screened, no insects or animals should be in building or near it.

12. Water supply.
   (a). Well should be at least 100 feet from all buildings.
   (b). Well should be on elevated portion of school ground.
   (c). Well should be protected from all surface drainage.
   (d). Water cooler should be washed and aired daily.
   (e). Pupils must use individual dringing cup.

13. Play ground.
    (a). Each child should have 50 square feet of play ground.
    (b). Play ground should be free from all rubbish and odors.
    (c). There should be a good supply of sunshine and fresh air for each pupil.
    (d). Play ground be made cheerful by the addition of a few flowers and trees.
    (e). Play ground should have a good supply of play ground apperatus.

Anti-fly Crusade

The sanitation specialist will introduce the anti-fly crusade into as many counties as demand it and for which she can find time. The plans are to have one school in each county to take "The Trial of Mr. Fly" as a play to be put on by the school children. The County Home Demonstration Agent will ask the school to take the play and see that it is ready to be given on the date set by the specialist. The specialist will be present on that date and act the part of the Judge in the play. After the play she will explain that people can become demonstrators in sanitation as well as in Foods and Clothing and she wishes to enroll a number of demonstrators in this crusade. All wishing to become demonstrators will be given literature and cards that are used in this demonstration and the family or home will be called a crusader making war on one of our most dreaded enemies, the fly. Every member of the family can have a part in this war and it will take the cooperation of the entire family to make a successful crusader. This is not to be a "Swat the Fly" campaign but "Storm the Fly" crusade.

Play.----The Trial of a Fly.

Court convenes.

Jury selected;-twelve jurymen from school children.

Judge;-Specialist.

Charged Fly;-A large fly made of cloth and stuffed with cotton.

Witnesses;-A group of school children.

Sheriff;-A school boy.

Lawyer:-An older pupil.

We will hear the trial of Mr. Fly who has been charged with murder in the first degree.

First Witness:-Representative from the Department of Agriculture.

Witness is sworn in.

Lawyer:- "Where does the house fly lay her eggs"?

Witness: "In filth; chiefly in horse manure and outhouses."

Lawyer: "How long does it take the egg to hatch?"

Witness: "From six to twenty four hours."

Lawyer: "How long does the fly remain in the maggot stage?"

Witness: "From four to five days."

Lawyer: "How long is the fly in the pupae stage?"

Witness: "From four days to four or five months according to temperature and surroundings."

Lawyer: "About how long does an adult fly live?"

Witness: "The life time of an adult fly is about thirty days."

Lawyer: "How many eggs does one fly lay?"

Witness: "Each female lays about nine hundred eggs."

Second Witness, a farmer.

Lawyer: "What is the favorite place for flies to lay their eggs?"

Witness: x"Damp horse manure."

Lawyer: "Do flies ever lay their eggs in hog, cow or chicken manure."

Witenss: "Yes if it is damp and there is not an abundance of horse manure."

Lawyer: "Is it true that flies breed in human excrement?"

Witness: "Yes, they like it very much as a breeding place."

x The House Fly, L. O. Hamord

Lawyer: "It could never be proven on a fly that she lays her eggs in garbage or rubbish could it?"

Witness: "Yes it is very easy to find fly maggots in garbage that is kept more than three days.

Third witness: milk maid.

Lawyer: "Do flies like milk?"

Witness: "They are very fond of it."

Lawyer: "Where is the fly's favorite bathing pool?"

Witness: "In a fresh pail of milk that I have just milked."

Lawyer: "How do you get the fly out of the milk?"

Witness: "I take it to the milkhouse and strain it out after it has soaked for about thirty minutes."

Lawyer: "Does the fly go in bathing alone?"

Witness: "No he brings a host of his friends, the germ family on his feet."

Lawyer: "Give the name of some of these children."

Witness: "Typhoid fever and diarrhaea are the most noted of this group."

Fourth witness, cook.

Lawyer: "Are you acquainted with Mr. Fly?"

Witness: "Yes, he calls on me every day from the first of April until Thanksgiving."

Lawyer: "What! Is it so important that he must come every day?"

Witness: "Why it is always clean food he wants to mix with the food he has gotten from the toilet and barnyard in order to give him a balanced diet."

Lawyer: "Does he ever entertain guests in your kitchen?"

Witness: "Yes he very seldom comes without several of the germ children."

Lawyer: "He always accompanies his guests to their homes doesn't he?"

Witness: "No he always leaves some of them on my food and utensils."

Lawyer: "Are you delighted to have these germ children with you?"

Witness: "Not at all. They spoil my food and cause my children to have diseases.

Fifth witness, grocery man.

Lagyer: "Where does the fly go after leaving the manure pile, privy vault and spittoon?"

Witness: "Into the grocery store and on all fruits and vegetables that are not covered."

Lawyer: "Flies do no harm on your fruits and vegetables, you cannot see where they have gone."

Witness: "Yes they do much harm. They wipe the disease germs from their feet on my apples and oranges as if they were door mats."

Lawyer: "Do they cause you any more trouble?"

Witness: "Yes they have specks on my windows and containers and my customers all go to buy groceries for their children where there are no specks"

Sixth Witness, Nurse.

Lawyer: "Does the fly visit those sick with typhoid fever, consumption, smallpox, diarrhea?"

Witness: "He certainly does and may call on you next."

Lawyer: "Is the fly dangerous?"

Witness: "Yes he spreads disease."

Lawyer: "How does he spread disease?"

Witness: "By carrying filthy little germs on his legs and wings and by "fly specks" after he has been feeding on infected material."

Lawyer: "What diseases or parasites may the fly carry?"

Witness: "Oh he carries so many. Typhoid fever, Diarhoia, Dysentary, Tuberculosis, Diptheria, Smallpox, Tape worm and Sleeping Sickness."

Lawyer: "Where are the greatest number od cases of typhoid fever and summer complaint?"

Witness: "Where there are the most flies."

Lawyer: "Where are the most flies."

Witness: "Where there is the most filth."

Lawyer: "Is the presence of flies an indication of near by filth?"

Witness: "It certainly is and that is disgr eeful."

Seventh witness, Doctor.

Lawyer: "How do flies infect us?

Witness: "By depositing germs upon mucus membranes, on the skin, or in articles of food. Biting flies infect through the skin."

Lawyer: "Why should we swat the fly?"

Witness: "Because he is the cause of much sickness and death."

Lawyer: "Did the fly ever kill any one?"

Witness: "He killed three times as many soldiers during the Spanish American war as were killed by Spanish Bullets. Much of the typhoid fever and summer compalint in Oklahoma every year is caused by flies."

Lawyer: "How may we successfully kill these murders?"

Witness: "By destroying or removing the manure pile; by making the privy vault fly proof; by keeping the back yard clean; by screening the house; by using fly swatters, fly traps, papers and insect powders

Right witness, Baby.

Lawyer: "Where does the fly sleep at night?"

Witness: "On the manure pile."

Lawyer: "Where does he get his breakfast."

Witness: "In the sick room. He has for breakfast those awful germs of the typhoid patient and always carries some on his feet to eat between meals."

Lawyer: "With whom does he have his dinner?"

Witness: "He has milk and oatmeal gruel for dinner and he dines with me. How long shall we Two eat together?"

We will now give a mother a few minutes to put in her plea.

Mother:- Disease does not spread its self. There must be an active carrier. The fly is one of those active carriers. He is mankinds most dreaded enemy. The house fly may leave fatal germs on your babies lips, his food and on your food. You would not let a man poison the food you eat or let him bring disease to your home. They why let the fly with his deadly germs gathered from filthy places come into your home? The fly is more deadly than any single known disease. Let us save our babies from this scourge. Kill the deadly house fly. Kill the fly and save the baby. "The fly that lives to fly away will live to breed a million a day."

Judge:---"You have heard the evidence in this case, the jury will retire to their room and prepare their verdict."

Forman of the jury returns and hands the verdict to the Judge signed by all the jury.

Judge reads verdict.

"After carefully weighing the evidence in this case we find Mr. Fly guilty of murder in the first degree. He

has not committed just one murder but thousands."

Sentence given by Judge:

"Under the existing circumstances, we will give Mr. Fly as strong a sentence as the law will allow.

First:-we will put concrete floors in our stalls so we can easily remove the manure each morning.

Second:-we will in some way protect the manure from Mr. Fly. Spread it on the field each day; put it in a fly tight manure bin; treat it with chemicals to kill the maggots or have maggot traps.

Third:-we will put up a sanitary toilet and bring our back yards up to the requirements of the score card for a back yard.

When we have accomplished these three things we will have destroyed all of Mr. Fly's homes.

Fourth:-we will bring Mr. Fly to starvation by cleanliness and good screens.

Fifth:-we will kill Mr. Fly by the use of fly traps, fly papers, and fly swatters.

Sixth and Last:-with this sentence carried out in the fullest degree the last member of Mr. Fly's family will hang in the capitol building at washington in 1930.

E n d.

We have completely done away with the fly in word why not in action? If we follow the outline planned by this judge the flies will actually disappear. We have planned a demonstration for those wishing to enter this crusade and make war on the flies. The

fly menace is a community problem. One person working by himself would do little good, so we want the community in a group to work at this job, with just a little planning and care, the fly will find the community an undesirable abode and he will move away to some other locality. Let us have him moved in a few days.

Demonstration for Anti-fly crusaders.

Time: Months of May, June, July and August.

Requirements:

1. Plan backyard to fill as many requirements of backyard score card as possible.
2. Repair toilet so that it will fill as many requirements of the outdoor toilet score card as possible.
3. Introduce some method of protecting manure from flies.
4. If no screens, screen the house; if there are screens repair them to protect the house from flies.
5. Swat as many flies as possible during April and May.

Literature:

Backyard score card.

Outdoor toilet score card.

Farmers' Bulletin number 851.

Points on Demonstration:

Perfect score on backyard score card . . . . . .100 points.

" " " outdoor toilet " " . . . . . .100 "

Manure well protected from flies. . . . . 100 "

Perfect screens . . . . . 75 points.

Flies swatted . . . . . 25 "

Total . . . . . .400 "

Rewards:

Total of fifty points during crusade . . . . .White Star.

Total of 100 points during crusade . . . . . .Silver Star.

Total of 200 points during crusade . . . . . .Gold Star.

Total of 400 points during crusade . . . . . .Prize.

The scoring will be done by the County Agents and the funds for the prizes will be raised by the agents in any way they think best. The stars should be kept up in front of the house to encourage people to try for more stars.

What	When	Where	How
Work on sanitation	year of 1925	State of Oklahoma	In cooperation with State Health Authorities County Health Nurse and Doctor and County Home Demonstration Agent.
Field work.	First week of November	Western half of state.	Demonstrations given by specialist to local demonstrators.
Gather reports from County Home Demonstration agents:	Last three weeks of November	Office	Through County Home demonstration agents.
Make annual reports and prepare work for coming year.	December	Office	Annual report made from reports gathered during year.
Present work to County Home Demonstration Agents-make plan of work.	First and second week of January.	A. & M. College.	Demonstrations and lectures by specialist.
Field work	Third and Fourth weeks of January	Eastern half of state.	Demonstrations given by specialist to local demonstrators.
Sanitary school campaign	First and second weeks of February	Southwestern section of state.	In cooperation with County Supt; county agents, school boards, teacher.
Office work	Third week of February.	Office	In cooperation with office force.

What	When	Where	How
Sanitary School campaign	Fourth week of February	Northwestern Section of state	In cooperation with County Supt. County agents, school board teachers.
Sanitary school Campaign	First week of March	Northwestern section of state	In cooperation with County Supt. County Agents, school board teachers.
Field work	Second and third weeks of March	Eastern part of state.	Demonstrations by specialist to local Demonstrators.
Office work	Fourth week or March	Office	In cooperation with office force.
Field work	1st-2 weeks of April	Eastern Section of state	Demonstrations given by specialist to local demonstrators.
Office work	Third week of April	office	In cooperation with office force.
Antifly crusade	Fourth week of April	Southeastern Section of state	Introduce the work by play given by school children. Work through County Home demonstration agents.
Antifly crusade	First week of May	Northeastern section of state	Same.
Office work	Second week of May	Office	In cooperation with Office force.
Field work	Third and fourth weeks of May	Eastern Section of state	Demonstrations given by specialist to local demonstrators.
Office work	First week of June	Office	In cooperation with Office force.
Emergency	Second week of June	Office-any place needed	Lectures and demonstrations by specialist.

What	When	Where	How
Field work	Third and Fourth weeks of June	Eastern Section of state.	Demonstrations given by specialist to local demonstration.
Vacation	First and Second weeks of July	Home	
Field work	Third and Fourth weeks of July	Western half of state.	Demonstrations given by specialist to local demonstrators.
Farm Congress and Agents Meeting	First and second weeks of August	A. & M. College	Demonstrations and lectures given by specialist to women and girl's clubs and County Home Demonstration Agents.
Office work	Third week of August	Office	In cooperation with office force
Field work	Fourth week of August	Western section of state	Demonstrations given by specialist to local demonstrators.
Field work	First and second weeks of September	Western half of state	Same.
Office work	Third week of September	Office	In cooperation with office force.
Field work	Fourth week of September	Western half of state	Demonstrations given by specialist to local demonstrators.
Office work	Second week of October.	Office	In cooperation with office force.
Emergency Week	Third week of October	Where the need seems to be greatest.	Lectures and Demonstrations by specialist.
Field work	Fourth week of October	Western half of state.	Demonstrations given by specialist to local demonstrators.

Miscellaneous

Illustrative Demonstrations to be given during Farm Congress.

1. The use of a brush in cleaning.

Equipment:- Handy, sink, bottle and vegetable brush, milk and baby bottles, cut glass ware, sieves, graters, stew pans, milk pails and garbage can.

Discussion:

Many times the housewife finds it difficult to clean milk bottles, cutglass ware, sieves and graters. The bottles are difficult to clean because we can not get anything down into the bottle to work with and the glass ware and sieve holds the food or dirt firmly in the grooves or meshes and the dish cloth passes over them without removing the material then what shall we do? The handles of stew pans and pails catch material and it is very hard to remove and sometimes we have a tendency to let it stay until the next washing and so the story goes. Often we don't realize the danger of the small amount of decaying food under the handle of the stewer but when we know that one cubic centimeter of decaying food may contain millions of harmful bacteria we begin to think of some way of removing this food or milk each time the vessel is used. One of the easist ways of cleaning such utensils is by the use of a brush and soap and water.

Procedure:

To clean a milk bottle a long brush with a long handle is

very nice. Just partly fill the bottle with warm soap suds and wash with brush, and sterilize. Cutglass ware is cleaned by washing with warm soap suds and a vegetable brush, rinsed and drained. Stem pans are cleaned around the handle by using a sink or vegetable brush and soap and water. Sieves and graters are rubbed first on one side with a brush then on the other, and garbage cans can very nicely be cleaned by using a long handled brush with soap suds. Each kitchen should be furnished with two or three good brushes and these brushes used every day. Sterilization may kill the bacteria around the handle of the milk pail but it will not remove it and the dead bacteria and dirt will be a good place for other bacteria to grow and flurish.

2. Methods of Dusting.

Equipment:- Straw broom feather duster dust cloth and vacuum cleaner.

Discussion:- The question has been asked do we get disease germs from the air? Yes we get disease germs from the air, the best example we could think of is T. B. Suppose a T. B. Patient should spit on the floor. After a while this sputum dries and the wind carries the bacteria into the air. Will bacteria stay in clean air, air free from dust particles? Do bacteria move by themselves or must they have something to ride on? Bacteria do not stay in air free from foreign particles, they must have something to ride on some kind of a carriage. If it were possible to live and breath air free from dust, smoke and such things there would be no danger of getting

bacteria from air. The perfect place to live then would be in air free from all these things so we want to keep the air around us as clean as possible. The best way to do this is to transplant as little dust as possible. Suppose we sweep with a straw broom, we just move or transplant the dust from the floor to the furniture, then we dust with a feather duster, another move has been made and the dust is on the floor again. In those two moves the dust has made it passed through the air and we breathed our part of it. Is there a way to protect our lungs from this dust that we must in some way move around to make like we are cleaning house? We will not try three ways of dusting and sweeping and compare these methods.

Procedure:-

Dust the room with a feather duster and sweep with a straw broom. Observe the amount of dust in the air and on the furniture. Dust another similar room with a moistened cloth and sweep with a dampened broom, notice results. Clean room with a vacuum cleandr and compare results from the three rooms.

An experiment was once tried with plates. One plate was exposed to the air while 6 strokes were taken with an ordinary straw broom. The second plate was exposed while 6 strokes were taken with a dampened straw broom and the third with six pushes of the vacuum cleaner. The results were, after a few days incubation of the plates, the first plate showed 50 bacteria, second plate showed

25 bacteria, and the third 2 bacteria.

This shows that the use of dry straw broom is a very poor method of sweeping and that use of vacuum cleaner is a good method of cleaning.

In cleaning always begin at the top and clean down, ceiling, walls, furniture and floor.

Some work in Sanitation to be Done at Small Town Fairs

During the fairs in small towns the specialist will ask the county Home Demonstration Agent and the County Agent to arrange a contest in sanitation between the different stores or business houses of the town. Each business house will be asked to have its building in as perfect condition as possible. All rules of sanitation are to be remembered first. Then they are ask to make each place as attractive as possible. During one day of the fair the stores will be open and the public will be asked to inspect the different business houses for sanitationand attractiveness. The clean store score card will be placed on the door of each building for its instructive value. This contest will be of value in two ways. For its educative value in teaching the principles of sanitation and as an advertisement for the business men.

At the close of the day set for the contest the stores will all be scored using the clean store score card. The store having the highest score will receive a token presented on the fair grounds. In addition to the score card for stores there is prepared a score card for a town and the people of the town will be asked to clean up their residence and the town as a whole will be scored. Some lessons in sanitation can very nicely be taught this way. After the town is scored the fair grounds will be inspected for sanitation as the source of drinking water, drinking cups, toilets and care of live stock on the grounds. It is a common scene at a small town fair to see a l

large open tank of water with a dozen drinking cups dangling on strings over the tank and every one from the baby to grandmother drinking out of the same cup, and every passing thing falling into the tank. The condition of the privies of most fair grounds would not make a pleasant sight or leave pleasant memories in our minds. There are too many unfortunate people that go to the fair to have a pleasant visit with their neighbors and return with some contagious disease. A fair carried on as it should be has a great social value for most people but this value can be lost in the dust and dirt of the fair grounds. Let us clean up the town and fair grounds and in so doing prevent disease and educate the people to the value of cleanliness.

In addition to all this work done during the fair there will be a certain part of the exhibit tent set apart for the exhibits in sanitation. These exhibits will include well made efficient fly traps, plans for a model cellar, a model backyard, a sanitary privy, out houses, dairy barn, milk house and for clever posters on sanitation. The club boys and girls will prepare these exhibits along with their exhibits in other lines and prizes will be awarded as for other exhibits.

Clean Store Score Card	Perfect Score	Score
Clean side walks	15	
Clean windows	10	
Clean floors	10	
Cleanliness ar rear of store	15	
Freedom from flies	15	
Freedom from insects and mice	10	
Attractive show windows	10	
Attractive arrangement of stock	20	
Total	100	

Clean Town Score Card	Perfect Score	Score
Sanitary water supply	15	
Sewage disposal	15	
Garbage disposal	10	
Manure disposal	10	
Sanitary markets	10	
Sanitation of school houses	5	
Sanitation of homes and yards	5	
Clean streets and alleys	5	
Clean vacant lots	5	
Freedom from flies and rats	5	
Attractive fences	5	
Attractive play grounds and parks	5	
Total	100	

Summer Camps.

People very often spend a part of the summer weeks in an outdoor camp for the health and recreational value they may get from a little visit away from home and cares of daily life. The health value which is expected to be gained from such a trip is very often badly clouded or entirely overshadowed by the insanitary conditions of the camp. All kinds of food is eaten, food prepared in every way possible, just any old water is drunk, because when we get thirsty we drink even tadpole soup. After a day of real fun we can sleep even in the hottest bottles of bedbugs and other like animals. We go camping to fish and swim and the swimming hole is a good one even if it is thick with human waste. If our summer camp was placed in the middle of our farm do you suppose we would enjoy living in that home for a year and yet we live there two weeks or a month in the warmest part of the summer when the bacteria are doing their greatest work.

All the cleanly and preventive measures desirable at home must be emphasized in the camp, for there is a great tendency to let down on all the sanitary customs trusting country air or some other influence equally vague. The water supply offers one of the most difficult problems in the outdoor temporary camp. There are no conveniences at all and the source of the water is often questionable. Lake water if often used for drinking by campers, even though that same lake serves for fishing and bathing, and receives all drainage from the camp. Spring water is usually

Home and Community Hygiene, Jean Broadhurst.

pleasant to drink but is often polluted by surface drainage and should be protected in some way, a good covering or a wall may be put around the spring. Wells are often infected by surface drainage because of the large number near the well and no provision for the proper disposal of human waste and garbage.

The question of the toilet is a very difficult one in a camp. The camp is usually crowded and no conveniences so the human waste may become a great menace to all present. A dirt toilet where dirt and ashes are available is about the best one under these circumstances. The receiving vault should be fly proof and emptied often. Lime should be mixed with the dirt as it serves a deodorizer. Toilet should be fly proof and mosquito proof.

The garbage should be disposed of in such a way that there will be no danger of pollution of the drinking water and so it will not harbor flies and mice. It should be burned, buried, or carried away so far from the camp that it could not cause any trouble at all.

Food is often restricted and prepared under insanitary conditions. Some try to economize on food and the diet is not what it should be. It is prepared in the open air receiving all that the wind may bring its way and because the water and heat are not convenient the cooking utensils and dishes are not always washed and scalded as they should be,. Because we are camped out under a tree is no excuse for our dishes not being scalded.

Insect pests are a real menace in summer camps, especially if one group of campers follow another in the tents and buildings.

The tent, building and bed becomes infected with bedbugs and their friends and they are just passed from one group of campers to the next to be carried back home and take renewed energy in their new abode. All buildings and furniture should be thoroughly cleaned, and disinfected before another group comes. Lakes and swiming holes are too often not large enough for the number that use them or they are not emptied often enough to be safe. They become so polluted with waste from the human body that they are a danger and their real purpose is defeated.

A Set of Rules for Campers.

1. Use safe water (free from surface drainage).
2. DDispose of garbage and waste material promptly, either by burning, burying or removing so far away that the drinking water cannot become contaminated nor flies will be drawn and harbored.
3. Use a dirt toilet, fly and mosquito proof, empty daily and disinfect with lime.
4. Eat plenty of nurishing food.
5. Protect food from flies, ants and mice.
6. Wash and scald all cooking utensils and dishes each time used
7. Never go into a tent, house, or any building that has been occ cupied by other campers until it thoroughly cleaned, aired and disinfected.
8. Do not bathe in water that is doubtful, use a clean both tub at home. Never bathe in water that is not safe for drinking purposes.

Public Gathering Places.

The sanitary conditions of public gathering places are many times very poor. Bad water supply, bad toilets, poor ventilating system, poor heating system, crowded rooms, no janitor service and no lights. A familiar scene to every one, who is acquainted with the country life, is a little church or school house, that has been closed for a week, all windows closed, floor dirty and people crowded around a stove exchanging ideas and colds.

Under these conditions thepublic gathering places are the nurseries for the spreading of contageous diseases,.Colds, childrens diseases and tuberculosis run wild in such places. The common belief among many people is that children must have whooping cough, small pox and such diseases and the sooner they get them the better it is,but that is a sad mistake. If we would just consult Mrs. Hygiene and Mr. Sanitation about a few important questions, the flight of these diseases could be greatly hindered. Mr. Hygiene says, "Cleanliness is a life preserver" and "There are too many short coffins in America". Mr. Sanitation speakes the glad tidings that prevention is better than cure and far cheaper. Also he says "Fresh air night and day keeps the medicine bottle away."

These undesirable conditions can easily be overcome with a little thought and effort. Why not think and work a little and prevent sickness, troubles, doctor bills and deaths in our homes. What is a sanitary gathering place for country people? We can

answer this question in a few statements.

First; a water supply that is not contaminated with human or animal waste.

Second; a toilet with a deep flyproof vault; a screened toilet with covered seats and a toilet cleaned and disinfected after each gathering.

Third; a ventilating system that supplies three thousand cubic feet of fresh air to each occupant every hour.

Fourth; a heating system that will supply enough heat that every one will be confortable (70 degrees F. is a good room temperature) and yet allow for proper ventilation.

Fifth; room should be large enough to allow sixteen square feet to each occupant.

Sixth; sunlight should not be shut out by stained glass windows and the artifical light should be such that it would be pleasing to the eyes.

Seventh; building should be kept in sanitary condition, thoroughly cleaned after each gathering and allowed to air between gatherings.

A country school house or church house could be arranged to fulfill these requirements and help to prevent the spread of disease. Let each one of us protect ourselves by having good sanitary surroundings.

Light, Heat, and Ventilation.

It has only been a short time that people have realized the value of light as a natural disinfectant. The house was built where it would be convenient to the well and barn with a "south exposure", the sunlight was all given to the unused living room and parlor and the kitchen and bed rooms were left to suffer in darkness. If the house is placed so that one side faces either the southeast or southwest, then every side of the house house has direct sunlight part of the day. Many times the cart is before the horse in house sanitation. The living room and parlor occupies the sunny side of the house, receives special care and are the most confortable rooms in the house, while the kitchen where the food is prepared and the porches and cellar where the food is stored are dark, damp and cold, receiving very little attention and are the most uncomfortable rooms of the house. Let us change our order of cleaning instead of beginning with the parlor and working back, lets begin with the cellar, backyard, proches and kitchen; give them the very best we have and then come to the bed rooms and living rooms.

The stimulating effect of sunlight is realized by few; its disinfecting value is still less appreciated. It is not unusual to find the shades drawn for days at a time--not to shut out the glare, but to keep the furniture and carpets from fading. Even

today there are house keepers all around us affected with such an acute form of carpetitis that newspapers are spread upon the carpet when the shades are raised. The cheapest and quickest of our natural disinfectants, sunlight, is lost by concern of carpet roses.

Sunlight is very important in our homes but the artifical light holds its place also. The lighting problem is chiefly concerned in remedying two extremes; too little light and too much light. It is by no means unusual to find some homes so poorly lighted that one can barely see the light itself. We should have enough light in the room that the farthest corner is light. Also the light should be soft and mellow and so placed that there will not be a glare in our eyes. Kerosene lights are mellow but many times there is not enough light in the room and if they are turned low they give off a disagreeable odor. Gas and electric lights are much better than kerosene lights if they are arranged so there will not be a glare in the eyes.

Dr. E. L. Bishop of Tennessee in his bulletin "Sanitation applied to the Rural Home" says; "Heating and ventilation are problems which are closely related. Of Course, in summer no artifical heat is required and people are apt to leave several windows and doors open so that adequate ventilation is secured. But during colder weather both heating and ventilation becomes question of great impertance. A temperature best suited to

to physical welfare is one from 60 to 70 degrees Farenheit, and most homes are over heated rather than under heated. This is often a fertile source of "colds" and other affections of the air passages that may be more serious in nature. A certain moisture of the air of a room should be maintained, for dry heat evaporates the fluids which protect and bathe the air passages, and leaves the mucous membranes of these passages unprotected from the germs that produce "colds", pneumonia and other diseases. Indeed, homes that are overheated and rooms in which the air is allowed to become too dry and stale are almost as often the cause of taking cold as is the exposure to wet and cold weather. Among the different methods of heating a house, closed stoves offer perhaps the greatest difficulty in maintaining a proper condition of the air in a room in regard to humidity. Perhaps the best that can be done where such stoves are used is to keep a pan of water on the stove, thus supplying by evaporation, some moisture in the air of the room. Certain types of open stoves, open grates and fire places are usually more satisfactory from this standpoint. A socalled ventilating stove with an air flu leading air in from the outside of the building is often used in schools and large buildings and is said to be very well adapted to such use. Adequate draft should be provided for any arrangement, else certain amounts of the gases of combustion will draw back into the room. Furnace heating offers advantages and disadvantages which must be considered in each individual case.

Fresh air is natures tonic, and nature is the best doctor after all. Fresh air stimulates digestion, strengthens the nervous system, increases our resistance against disease and gives to us a sense of general well being. Therefore, proper ventilation of the home is an absolute essential to the welfare of that's home's occupants. Every room should be an "outside" room and should have ample window and door space. Then, no matter what the outside weather may be, proper ventilation and heating may be had. In cold weather windows need only be opened a short distance at the top to furnish sufficient air, provided there is an outlet, such as an open grate, fireplace or stove for the foul air of the room. At times, indeed, one opening is adequate if the difference in outdoor and indoor temperature is sufficient; for the warm air of the room rises and will flow out through the upper part of even a narrow opening while the cold air from outside flows in through the lower portion. In warmer weather much wider space will, of course, have to be provided. Proper ventilation means that a stream of fresh air must constantly replace stale air, and that the substances thrown off by the process of heating must be removed; that the air of the room be maintained at proper temperature and moistness; that gases, odors germs, dust and other substances poisoning the air of the inclosed spaces, must be removed; and , that it must dilute and remove the impurities produced by the burning of gases, candles lamps and other sources.

Annual Report.

Number of Clubs or groups { Girls / Women.

Number of members enrolled in Sanitation { Women / Girls / Boys / Men.

Number of members completing { Women / Girls / Boys.

Number of Illustrations given.

Number of Demonstrations started { Women / Girls / Boys.

Number of Demonstrations completed { Women / Girls / Boys

Number of homes adopting better practices in care of food.

Number of homes adopting better practices in care of milk.

Number of homes adopting better practices in care of sick.

Number of homes adopting better practices in prevention of ~~the sick~~ disease.

Number of homes adopting better practices in care of water supply.

Number of homes adopting better practices in care of garbage.

Number of homes having more sanitary back yards.

Number of sanitary toilets installed.

Number of homes screened for first time.

MAP SHOWING ROUTE OF FIELD TRIPS

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I'm Jimmy Germ---I'm a millionaire
I hate clean folks and I hate fresh air.
I am a trouble maker and I spend my time,
Looking for victims for my style of crime.

If I find a boy who likes to scrub
And is not afraid of his daily tub,
I shun him for it is plain to see
There is no room on that boy for me.

What I like best is a dirty boy
(Dirt makes disease and brings me joy)
Who sleeps in impure air all night
With doors and windows all shut tight.

On him I find a home until,
I mulitply and make him ill.
Then we enjoy his misery,
Oh, a villian's life is the life for me.

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