

What About Electricity for the Farm Kitchen?

By MRS. VIVIAN BRASHEAR

Graduate Assistant in Household Equipment

A COLD, penetrating February chill pervaded a farm house in northern Iowa. It was 2:30 a. m. A light suddenly flashed on and the huddled figure of a woman hurried into a cold kitchen, kindled a fire in the wood stove and stood shivering until the milk for the baby's night feeding was heated. She did not give any particular thought to this duty—it was repeated every night—nor did she begrudge the effort, even though her teeth did chatter and the fire refused to start. She was the baby's mother.

In the early winter morning the father noticed the cold, as he went to tend the stock, and was glad the barn was so warm. Yes, the new tank heater was doing good work—no more icy water for his stock to drink. It certainly paid to get that new tank heater. The last one he had bought didn't do the work as it should have done.

The home was fairly comfortable, an average Iowa farm home. It boasted electric lights, water in the kitchen and a bathroom. The family was happy. The mother was kept busy caring for the house and her four small children, one, a baby of a few months. The father was a good husband and wanted to make things as comfortable for his family as he could. Neither one was able to get away from home very often for there was always the daily chores to be started before dark and no hired help was kept.

One day the writer, from the Home Economics Division of Iowa State College, called on the family. Inquiring about the baby, she discovered the mother had no way of heating food except on the wood stove. Immediately the immersion heater was suggested, a contrivance of simple small metal cylinders that hangs over the side of a pan or glass, and heats liquids or gruels in a few minutes. And a glow heater for the bedroom. The very thing! An immersion heater would cost less than a cent a day to use, as little as that mother would use one. A glow heater would be more expensive to operate, but after all it would not be used long at a time.

The picture changes. The same cold winter. It is 2:30 a. m. Close to the bed is an electric light switch and a service outlet for electrical appliances. The light is soon on and a glow heater starts warming the room. The mother, arising, takes from a window-box outside the window the baby's milk and heats it with the electric immersion heater. In a few minutes the baby is happily engaged in consuming his bottle of milk, heated to the proper temperature. Both mother and baby are warm and comfortable.

Fine picture, isn't it, if it were true? And the best of it all is that the picture is true. It is a real picture of one

of the 13 farm homes around Garner, Iowa, which have been selected as co-operating farms on which to try out the possible ways of improving farm life through the use of electricity. The incident described is only one of a score which the writer could mention to illustrate the way in which many of the inconveniences of farm life have been lessened for these Garner women. This experiment, under the name of Iowa's Rural Community for Electrical Development, was started two years ago under the supervision of Iowa State College.

To let farm men and women find for themselves by actual use how electricity might help them was the plan of the rural leaders who were responsible for this experiment. A national committee called the Committee on the Relation of Electricity to Agriculture was chosen from educational and commercial fields—all interested in rural development. Prof. Frank Paine of the Department of Electrical Engineering, Iowa State College, was appointed Director of Iowa's experiment. He is also Assistant Director of the National Committee, which assists in the development of all of the twenty state experiments on rural electrification. To carry on the work at Garner required the services of an engineer familiar with both electrical and agricultural problems. Mr. Frank Zink, '24, Iowa State College, was selected as field engineer for the work. The work with the farm home equipment is under the supervision of the Household Equipment Section of the Home Economics Division of Iowa State College.

The farmers and farmers' wives were consulted as to their needs in the way of equipment. Various electrical manufacturers furnished the electrical equipment free of charge. For the men there were installed motors for grinding and elevating grain, separators, pumps, milking machines, and lights for all the farm buildings. The homes were equipped with washing machines, sewing machines, irons, ironing machines, water heaters, glow heaters, immersion heaters, warming pads, percolators, toasters, waffle irons, fans, refrigerators, ranges and even curling irons, all run by electricity.

In order to learn how much electricity farm folks use, meters were connected to all devices. Every month these meters are read and the results tell most interesting stories. All of the figures about electricity costs, the use of electrical equipment and experiences with electricity in the farm homes comes from the actual experiences of these thirteen cooperators with whom the writer worked.

Why was it that the amount of electricity used by ranges began to increase so rapidly in June? Farm

women were beginning to can. And in August came threshing. Could a farm woman really depend upon one lone electric range for getting meals for 20 to 30 hungry men? She could and she did. Of course, the coffee percolators helped. So did the cooling breezes from the electric fans, and the ice from the electric refrigerators. Gone were the hot kitchens, cluttered with hug baskets of cobs and buckets of coal waiting in the entry—perhaps to be stumbled over as one hurried out to pump a bucket of water. The water—by electric power—now is pumped into the kitchen. There is no longer need of cobs or coal, for at the turn of a switch electricity, clean and convenient, heats only the pans of food, and not the whole kitchen.

Can farm women afford to cook for threshers so comfortably? Take one specific case, for example. To prepare all food eaten and to heat all the water for both cooking and dish washing cost one homemaker two cents per thresher. This figure is based on the cost of the electricity used in preparing dinners for 40 men for two consecutive days—a total of 80 dinners.

In one of the homes where the electric range only was used, a 17 pound roast was prepared. In this case the oven was heated for 20 minutes, reaching a temperature of 500 degrees F. The meat was put into the oven uncovered and was allowed to sear at that high heat. The searing required 25 minutes. Then the electricity was turned off. It is of interest to note that the electricity was on for 45 minutes only. The meat, however, remained in the oven for 2½ hours longer, and the result was a juicy, tender, well-cooked roast—cooked largely by the heat retained in the well insulated oven. It required 2¼ K. W. hours of electricity to cook the roast which would cost at average rates of 5c to 7c per K. W. hour, 11c to 16c. The fact that this roast was three to four times as large as the ordinary roast makes these figures most interesting.

Where fuel is plentiful, such as coke and wood, a combination stove is being used. This stove is made up of two different heating units—one of these is a fire box for wood or coal, while the other is wired for electricity so either fuel or both may be used. In farm kitchens that are unheated or where there is no electric water heater, the wood or coal part of the range is used to heat the kitchen and to heat a tank of water, for there is a water front in this stove. These ranges are proving popular with the cooperators. They, of course, use less electricity.

The amount of electricity used by the ranges has varied widely from month to month. During the winter months wood and coal ranges were

(Continued on page 14)

ETERNAL



QUESTION

C.B.E.

The Possibilities of Dietetics

What are the possibilities of dietetics as a field for women?

I think you will find the subject of dietetics a most interesting one to pursue and also you will find that it will prepare you for various openings such as private dietitians in families, or small institutions, hospital and hotel dietitians.

My suggestion for training would be that you include in your course all the chemistry, physics, and bacteriology that you can in addition to good foundation courses in food preparation, service and selection with a good course in dietetics both for normal and abnormal. You will find that you will need after graduation from a university a practical course in a good hospital for your actual hospital contract. This you can get in any one of the number of good hospitals in six months time. They usually give you a maintenance during this time and some hospitals even 45 to 50 dollars a month as well. I should by all means include such a practical course and not try to attempt to get along without it. It would be very fine if you could take this course following your Sophomore year and before you take your Senior work at college.

Pasteurizing Milk at Home

How do you pasteurize small quantities of milk for use in the home?

The usual method for pasteurization requires a temperature of 145 degree F. The milk is held at this temperature from 20 to 30 minutes. It may be conveniently pasteurized in the home by putting the milk in bottles or small containers, which in turn are placed in a larger container filled with water until it reaches the level of the milk. The larger container must have a false bottom of wooden slats or a pie tin in which holes have been punched. Insert a thermometer in the milk. Heat the water until the temperature of the milk reads 155 degrees F. Remove from stove and allow to stand 20 to 30 minutes. Remove from the water and cool quickly. Keep in a cool place.

Mixing Water With Egg

What is the result of mixing water with egg whites or egg yolks?

Mixing water with egg whites or egg yolks in angel or gold cakes results in hydration of the globulin, the protein of the egg which results in a more tender lighter textured cake. The water is usually added when the whites or yolks are partially beaten. Meringues are sometimes made this way, too, and are always more tender after beating. Using water is optional with the individual as very excellent angel cakes are made without it.

Removing Cake From the Pan

How to remove an angel food cake from a pan.

The best technique for removing angel food or sponge cake from the pan is to let them stand in the pan inverted and raised from the table by propping it up on two cups until the cake is cooled and shrunk away from the edges of the pan. Be sure to leave your cake in the oven until the cake shows signs of shrinking from the pan and I think by letting it stand until thoroughly cooled and not trying to take it out of the pan while hot it will come out with least difficulty.

ELECTRICITY FOR THE FARM

(Continued from page 13)

used daily, chiefly because of the necessity of heating the kitchens. Most of the farm kitchens, even in furnace heated homes, are without heat, other than that furnished by the cooking stove. For the winter months the average amount of electricity used for ranges was less than 1½ K. W. Hrs. per day—or in terms of 5c and 7c rates per K. W. Hr., from 8c to 12c per day. Is not the farmer's time that is spent in chopping, splitting and hauling fuel worth more than 8c a day? In summer, when no one wants to carry wood or to work around a hot wood stove, the electricity used for ranges was around 5 K. W. Hrs. per day—or at the same rates, 25c to 35c a day.

The farm homemaker spends a large share of her time in summer standing

over the cook stove. She cans all the surplus products of garden and orchard. She cooks for hay men, for threshers, for silo fillers, etc., all in addition to her daily work of caring for the family. Surely the farm homemaker's strength and time spent in carrying fuel and in cooking justify comfort and convenience in the kitchen.

Waffles for breakfast! Everybody smiles, for a farm family around Garner may sit down to a breakfast of hot, crisp waffles, baked on an electric waffle iron right on the table. No jumping up and down for mother. She enjoys the breakfast even more than the rest of the family. The batter mixture is in a pitcher on the table close to the electric waffle iron. She pours in the batter and in a few minutes out comes a golden brown appetite-tempter, and so on they follow, quickly and efficiently, until no one can hold more. And along with them goes clear, fragrant coffee made in an electric percolator. Garner farm folks are enjoying life these days. At what cost? The average percolator uses about 6 K. W. Hrs. of electricity per month and the waffle iron 4. If you figure your own electric rate for those amounts you can see that the cost would not be over 2c a day for the percolator or waffle iron. It should be noted, however, that waffles are not served every morning.

As the homemaker becomes more expert in handling electric cooking equipment a greater saving of electricity is seen. Because of this fact, and it applies to the use of electricity on the whole farm, it was thought best to have the experiment run for a period of several years. At the end of that time reliable and definite figures as to the practicability of electricity on the farm will be available. Already homemakers around Garner are appreciating the cleanness, the convenience and efficiency of electricity as a means of cooking in farm kitchens.

"Happiness is peace after effort, the overcoming of difficulties, the feeling of security and well being."

"That blessings come disguised is true. Of course, you ought to prize them. The trouble is that often you can scarcely recognize them."