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Another Way to Save Fuel

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Grape Juice and Milk for School Children

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Interest in the problem of supplementary feeding of school children, and in the previous experimental work done to determine the value of various foods, such as oranges, figs and milk, for this purpose, led Zorada Titus, M. S. in foods and nutrition, July 1927, to conduct a study of the effect of the supplementary feeding of grape juice, and of milk, on the rate of growth of children, for her master's thesis.

Two periods of experimentation were conducted; one between October 22 and December 18; the other from January 19 to March 18, with children in the Roosevelt grade school at Ames. Children with an age range of 6 to 16 years were chosen from the first to the sixth grades. They were divided into four groups and the supplementary food given during mid-morning recess. One group was given milk; another, diluted sweetened grape juice; a third, undiluted unsweetened grape juice; and the fourth acted as controls. An interesting indication of seasonal growth was noted in the greater percentage of weight gains during the first period between October 22 and December 18, than was recorded in the second period.

The results of the study showed, however, that the changes in heights and weights of the cildren were not of sufficient significance to warrant definite conclusions upon the value of grape juice as a supplement to the diet of growing children. During both periods, the average gain in weight per week of the children in the control group equalled, or was greater, than that noted among the children in the "milk" or "grape juice" groups. Increase in height, however, was observed to be less than in other groups. The undiluted grape juice group was second, and the milk group rated third in weight-gain during the first period. Gains of these groups during the second period were in the same relation to one another, although that of individuals was less than during the first period.

Observation and comparison of height and weight increase has shown that this growth proceeds along parallel lines in healthy children. On an insufficient diet, growth in height may continue even though there is loss in weight. The present investigation substantiates this observation as records showed that 100 percent of the children of all ages increased in height during a period between March 18 and May 27, although weight increases were relatively insignificant. No attempt was made to control the home diet of these children during the experiment, although a week's dietary record was furnished by each child during both periods It was suggested that a carefully controlled study, in which the groups of children could be placed upon accurately-determined basal diet supplemented with grape juice and milk would make possible definite conclusions upon the value of these foods for supplementary feeding of school children.

Another Way to Save Fuel

By LUCILE HARRIS

WE are constantly urging the woman of the home to be economical. We insist that she buy food in season, that clothing be bought with the utmost care and that the family income be carefully budgeted in order to save money for other things.

But have we ever informed her how to economize on fuel? Of course, she has been careful to turn out the gas when the cooking process was over. She was taught to bank the fire, thus preventing waste of material in building it again. But has she ever been taught that there are other ways in which she can economize on fuel?

We will use, for an example, a family in which there is a small child. Two things that the child needs every day are baked potato and cereal. Both require a long time for cooking. The potato may be boiled, but is preferred baked for the child's diet, so we'll assume that a potato is baked every day, as is the general rule in our Home Management Houses. This potato may be baked while cooking other things, but sometimes the oven is heated especially for this bit of cooking.

In the Household Equipment Laboratory cost studies have been run on baking potatoes in gas ovens. In an average stationary gas oven, 50.06 cubic feet of gas were used per day to bake one potato. If a portable single burner gas oven was used, only 21.27 cubic feet of gas was burned, thereby saving 28.29 cubic feet of gas by using the latter gas oven.

Perhaps this would mean more if considered from the standpoint of dollars and cents. In making these tests $2.00 per thousand cubic feet was used for calculation, the rate in Ames at the time these tests were made. The portable oven would effect a saving of .05658 cents per day. If a potato were baked every day it would result in a saving of $1.697 per month or $20.65 per year.

In cooking cereal more types of preparation were considered.

The following table shows the six methods of preparation of one cup of oatmeal cooked in two cups of water and the average cost of each method taken from five tests. Using the gas rate at $2.00 per thousand cubic feet and electricity at $.04 per kilowatt hour.

1. Electric pressure cooker
2. Pressure Cooker and Electric Stove
3. Electric Stove and Double Boiler
4. Fireless Cooker
5. Pressure Cooker and Gas Stove
6. Gas Stove and Double Boiler

Electricity	$.001072
Electricity	.00177
Electricity	.002006
Gas (to heat stoves)	.006325
Gas	.009042
Gas	.018994

Of course, the figures dealing with the comparative cost of gas and electricity would vary with the relative cost of each in every community.

But this table shows that anything that shortens the cooking time makes the process cheaper. This is true because we buy gas by the cubic foot and electricity by the kilowatt hour, and every foot or hour of use counts in dollars and cents.

The more the cooking process is prolonged the greater the amount of fuel required, consequently the cost will be increased.

The homemaker is often slow about buying such things as a prossure cooker, a fireless cooker or a small oven. This may be because of the first cost or because she thinks of them only as an added convenience. She already has a very good gas or electric stove. But does she know that through fuel economy she can save enough to pay for the equipment and have money for other things?

A very good portable oven may be purchased for $7.00 or $7.50, the purchasing price of which may be saved two or three times in the course of a year.

A pressure cooker will cost $18 to $30, and an electric pressure cooker about $57. It would take longer for the cookers to pay for themselves, according to these tests, but homemakers can use them for any preparation which would otherwise require long time cooking, thereby giving the woman more free time as well as being another way to save fuel.