

1941

Home Economists Delve In Test Tube Research

Lila Williamson
Iowa State College

Follow this and additional works at: <http://lib.dr.iastate.edu/homemaker>



Part of the [Home Economics Commons](#)

Recommended Citation

Williamson, Lila (1941) "Home Economists Delve In Test Tube Research," *The Iowa Homemaker*: Vol. 21 : No. 4 , Article 5.
Available at: <http://lib.dr.iastate.edu/homemaker/vol21/iss4/5>

This Article is brought to you for free and open access by the Student Publications at Iowa State University Digital Repository. It has been accepted for inclusion in The Iowa Homemaker by an authorized editor of Iowa State University Digital Repository. For more information, please contact digirep@iastate.edu.

Home Economists Delve In

Test Tube Research

Lila Williamson tells of scientific research as an important background for studies in home economics

ONE LOOK over the shoulders of earnest students working in laboratories among bottles and test tubes fills even the most frivolous person with deep respect for these campus scientists. As they search for the answer in the microscope, they make life easier and safer through more efficient techniques for numerous everyday routines. Campus laboratories are a haven of many theories soon to be brought to light.

Because the life cycle of albino rats is closely related to the human life cycle, and successive generations can be observed over a convenient period of time, theories are tried on the rats first in the laboratory. The rats themselves do not escape careful observation, and conditions influencing the production of uniform experimental animals in the foods and nutrition stock colony are being studied.

Pork comes in for a most profound investigation due to the important role it plays in the economic life of the people of Iowa and the relatively high daily consumption by Iowa farm families. Albino rats are fed a pork diet which will provide for successive reproduction and lactation, and support the life functions over successive generations, as well as to promote maintenance and growth. The effects of this dietary regime on the reproductive performance of the rats are being studied.

Lard, a common item on every kitchen shelf in the homes of Iowa farm families, is being lined up with other fats for comparison in a new research problem in Iowa State laboratories.

That glass of tomato juice or orange juice sparkling by your breakfast plate this morning had a real purpose there. It was to help fill the day's requirement for vitamin C, that substance needed to strengthen the tiny life lines known as blood capillaries and to maintain strong bones and teeth. A Japanese woman, Shizue Oda, has investigated techniques used in determining human needs for vitamin C, serving as her own experimental subject. She expects to continue this type of investigation with the Japanese people when she returns to her native land.

The Poultry Husbandry and Foods and Nutrition Departments have found that a period of 18 hours at a temperature of 37° just before freezing would put

poultry on the market in its choicest state of tenderness without deterioration in flavor and aroma.

Meat must be of prime quality. Often feeds of various kinds may have some effect on the palatability of poultry. There may be certain post-mortem changes in the carcass of the dressed birds. These possibilities are being considered in further research studies in these same two departments.

The bright color and flavor of commercially frozen foods have made homemakers envious enough to want



The foundation for studies in nutrition, equipment and food preservation is laid in the laboratory, where scientists spend hours in tedious experimental research

to know how to preserve their own foods by freezing. An experimental plant set up in the Iowa Agricultural Experiment Station for the purpose of carrying on an expanded program of research with frozen foods is a "miniature" one with 57 lockers and complete freezing equipment. A committee, representing the meats, poultry, horticulture and home economics research staffs, is now carrying on work to determine the best types of wrapping for meat, the best types of fruits and vegetables for storage, the effect of different quick-freezing and holding temperatures, as well as some of the work being done on poultry.

If you ever growl at the food service available in your eating establishment, you may quiet your wrath

(Continued on page 14)

Christmas

IS COMING SOON—

We don't wish to alarm you—but this is the year to do your Christmas shopping before December first if you don't want to be disappointed in finding the right gift.

Our shop is full of lovely things including the distinctive and unusual Christmas greetings you like so well.

Visit our shop now—choose the gifts your family and friends will appreciate and enjoy.

Florence Langford Gift Shop

413 Douglas Ave.

Downtown

FOR SMART CAMPUS PACE SETTERS . . .

- *New Styles*

- *New Materials*

Sizes 3½ to 10
AAAAA to B

- *New Colors*

FOOTWEAR

DOWNTOWN

Test Tube Research

(Continued from page 5)

with the knowledge that this subject is receiving its share of investigation. Information collected on food service in a number of representative colleges and universities indicates that policies of management considered desirable might well be standardized among educational institutions.

Research work is not confined to rats and human beings. Equipment is a big item for study, particularly in this modern age of time savers for every household routine. Electrical equipment is constantly being improved, and with each new model, inquiries are made by persons who want more than the manufacturer's information.

Ranges with combination ovens have been designed for use in homes without central heating units, but supplied with either electricity or gas through gas lines or in bottled form. Tests on these range ovens carried on in the household equipment laboratories will be of interest to homemakers who would like to own an electric or a gas range, yet must have a coal or wood range to heat the kitchen. The tests showed that in the use of the different fuels, different procedures must be followed. An intelligent use of the coal or wood unit for baking at the same time it is being used for heating purposes will save fuel costs.

The effect of the number of biscuits put in the oven at one time on fuel consumption and the browning of the product has been studied, and brought into consideration the problem on test methods for ranges. The final conclusion seems to be that any size load may be used to test the efficiency of the oven, since the size of the load has no significant effect on the browning of that load if the air temperature in the oven is held constant. Loads of 24 biscuits would probably be best as the browning of the tops and the bottoms are more nearly uniform. If you never have been absolutely sure about the correct temperature and time for biscuits, this study indicated that a temperature of 425° to 450° for a baking period of 12 minutes is desirable.

Questions concerning the best type of cleanser inspired research work on relative scouring effects of various household cleansers.

Purdue and Nebraska Universities are cooperating with the equipment laboratory here in detailed work on the operating efficiency of small electric food mixers. Tests are being run to determine the best combination of bowls and beater blades as to shape and size through the mixing of mayonnaise, and divinity candy, the effect on the texture of beaten egg whites and the effect on the structure of angel food cakes.

Any home can have adequate lighting, whether it has electric current or not. Real tips are offered in a project conducted on adequate methods of lighting a home using liquid fuels. There are too many gaudily decorated and straight up-and-down shades, according to this study. Glare is avoided and more light provided on reading surfaces if a shade is put on exposed light.

What happens to graduates after they leave the sheltering college environment? Effective pictures of a few phases of their living are being drawn from several studies. A project on the musical and dramatic participation of students in college showed that they continued their interests along these lines.

(This is the first of two articles concerning graduate research work in home economics at Iowa State.)