

**I**N THE unpretentious, white frame building on the northeast corner of campus, Iowa State research workers are constantly conducting experiments in the field of food technology. To you this means better food products.

The Food Processing Laboratory is similar to those at other colleges. Here new methods of food processing are being discovered and studied. Recent research has been concerned with eggs, beef and at present, poultry.

The results are then applied to production, processing, packaging, distribution, preparation and utilization of the food.

### Eggs are project

Enzyme action on egg whites, egg thermostabilization tests, and accompanying taste tests are made here, and the results are then released to manufacturers and to the public through two internationally distributed magazines, "Food Technology," and "Food Research."

Workers at the Iowa State College lab found it is necessary to remove sugar from liquid egg white prior to drying to produce a stable, usable albumen. This discovery led to the recent project in the Food Processing Laboratory — developing a new method for removing sugar from egg whites by treatment with specific enzymes.

The Iowa State College lab staff, under the supervision of Associate Director Dr. George Browning, is now employing an enzyme which appears to hold promise as a practical and satisfactory process.

### Bake angel cakes

For the testing, staff members of the food evaluation lab have baked angel food cakes with the rehydrated, enzyme-treated egg white. These cakes compared favorably in volume, texture and flavor with angel food cakes using fresh or frozen egg white.

The interior quality and functional properties of eggs with "oiled" and "thermostabilized" shells have been under extensive study. Thermostabilized eggs have been held in heated oil for approximately 16 minutes. For ordinary oiling, the eggs are dipped momen-



A research worker tests the freshness of an egg by breaking it out of the shell and measuring the height of the yolk.

tarily in heated oil. Both of these procedures have been used to slow down deterioration of eggs. Their condition before and after commercial storage is recorded and analyzed.

This study revealed that the whipping qualities of the egg white and stabilization properties needed for angel food cakes were not good in the thermostabilized eggs, but the sponge cake, plain cake and custard-making properties of these eggs were not significantly changed by the thermostabilization process.

One of the major problems in marketing shell eggs involves the loss of quality during handling and storage. Flavor is one of the important factors determining quality in shell eggs. Research on the flavor of untreated, oiled and thermostabilized shell eggs after commercial storage has been conducted with the use of taste panels.

### Taste tests

In a study in which eggs were stored for a total of 8 months, taste panels evaluated the flavor of scrambled and soft cooked eggs at monthly intervals. As the storage time increased, the flavor scores for all stored eggs were definitely lowered. However, after storage for 7 months, off-flavor was more noticeable in the oiled and thermostabilized eggs than in the untreated eggs.

The tests given to the panel are called "triangular" tests. Each person is given three samples to taste; two of these samples are alike. The individual is asked if he can detect a difference, and if so, which sample is different. A third question asks if there is one he prefers.

A taste panel of six people judges products in the

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# Better foods through research

by *Karla Baur*

*Experimental Cookery Junior*

# TOPS

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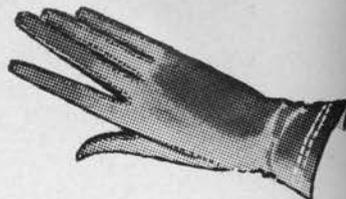
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## Shopping



## for leather

by Jane Hammerly

Technical Journalism Senior

**T**HIS YEAR, when you're doing your spring shopping, you'll find there are many new items made of leather. There will be long straight coats, bloused jackets, slipover shirt blouses and full, dressy top coats all in a variety of fascinating colors.

Each one of the leather items you look at will be labeled to tell you something about the leather. Do you know your leather terminology? Try a few of these terms and see.

*Buckskin* — leather from deer and elk. To be described as genuine buckskin, the leather must be from the outer cut of the skin from which the surface grain has been removed, not the underside.

*Capeskin* — commonly applied to all glove and garment leather made from sheepskins, with natural grain retained. Genuine capeskin from South Africa is a light, flexible, fine grain, durable leather, generally superior to wool sheepskins of the same and other districts.

*Chamois* — commonly used to describe the under-split of sheepskins and principally used for cleaning and polishing purposes and for gloves and garments. Genuine chamois is a soft leather originally made from skins of the Alpine antelope, or chamois.

*Crocking* — the rubbing off of coloring or finishing materials from leather onto other materials.

*Kid* — chrome-tanned grain glove leathers from goat or lambskins of wool or hair types—not really young goats.

*Patent* — surface achieved by covering the leather surface with successive coats of daub and varnish.

*Suede* — denotes a finish, not a leather. It is produced by running the leather surface on an emery wheel to separate the fibers and give the leather a nap. This process is usually used on the flesh side of the leather, not the grain side.

## Better foods

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specially lighted, odor and sound-proof taste-testing booths. At the top of each booth are red, yellow and white fluorescent lights to minimize color difference in the foods.

These series of experiments are financed by funds from both the state and federal government and by grants from industrial sources. The Food Processing Laboratory is under the auspices of the Iowa Agricultural Experiment Station and has a staff of full-time employees and graduate students.