

## FROZEN FOOD UNIT ADDED TO EXPERIMENTAL FOOD LABORATORY

by

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To assist in the study of freezing foods on the farm, a frozen food unit was constructed by the Agricultural Engineering Department with the assistance of a class in Farm Refrigeration. It will be used by Miss Eunice Kelly in the experimental food laboratory.

This unit is a 30 cubic foot freezer of a type suitable for an average farm family in North Dakota. The amount of food which can be stored in this unit would include one-half of an 800-pound steer, pork from half a pig weighing 250 pounds, 100 quarts of vegetables, 100 quarts of fruit; and still leave room for game, bread, and ice cream. Actually this is the amount of food it will hold at one time, but due to a constant turn over of food more than that may be handled by the freezer during a given year.

At first many people feel that this is too large for most families. Actual experience has shown that a family of four to six who plan on growing or preserving most of their fruits and vegetables, and who plan on purchasing in quantity or raising their own meat will need this much space.

Most frozen food units of this size are provided with a compartment for freezing. This unit is provided with a freezing shelf (shown in Figure 2) which reduces freezing time and prevents warm foods from thawing foods already frozen; and is more convenient, easier to install, and provides an improved coil arrangement for operation when not freezing.

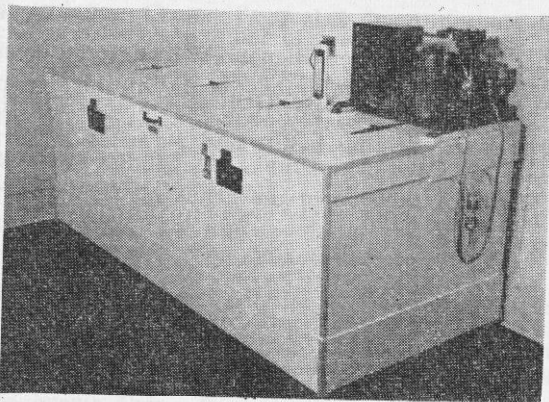


Figure 1. An outside view of the frozen food unit installed in the experimental food laboratory.

This unit is built in sections and will easily go through an ordinary door when knocked down. The walls are insulated with 6 inches of fill-type insulation. Actual operating costs of identical

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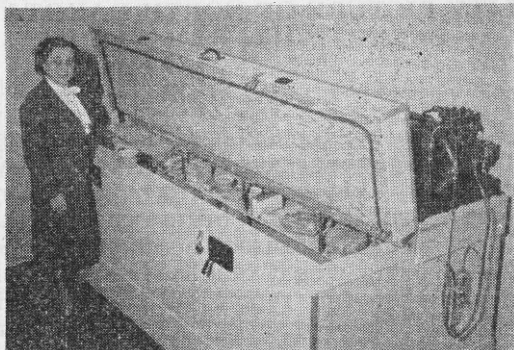


Figure 2. Showing the inside of the freezer with food on the freezing shelf.

units is just slightly over 100 KWH per month, or \$2.00 per month at the average 2-cent rate. The space provided is equal to five lockers which would rent at about \$4.00 per month at the usual \$10.00 per year locker rent. A unit of this type and size would cost approximately \$475.00, figuring the cost of materials, and hiring part of the labor. The convenience, increased food value preserved, and the saving of trips to town, go far in paying for the original cost. Plans are available from the Agricultural Engineering Department.