

NEW YORK STATE COLLEGE OF AGRICULTURE
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NEW YORK STATE AGRICULTURAL EXPERIMENT STATION
SOME FACTS ABOUT THE
NEW FOOD RESEARCH BUILDING
AND THE
FOOD RESEARCH PROGRAM
AT THE

NEW YORK STATE AGRICULTURAL EXPERIMENT STATION,
CORNELL UNIVERSITY,
GENEVA, N. Y.

Cornell University's New York State Agricultural Experiment Station at Geneva, a Division of the New York State College of Agriculture, a unit of the State University of New York, will dedicate a new food research building May 5 and 6, 1960. When completed and fully equipped, the building will represent an expenditure of about four million dollars. The architects were Shreve, Lamb and Harmon of New York City; the general contractor was William E. Bouley Construction Company, Auburn, New York.

How It Started

A food research building to permit development of the program at the Experiment Station was included on the original 1942 list of Post War Building Projects, with strong support from farm groups, food processors, and other representatives of the agricultural interests of New York State.

The Legislature first appropriated funds for the new building in 1945, under Governor Dewey's administration. The Korean War delayed this and other similar projects, but ground was finally broken in October, 1957, by Governor Harriman during the celebration of the 75th anniversary of the founding of the Experiment Station.

Actual construction got under way in the early spring of 1958 and Station personnel began moving into the new quarters March 2, 1960.

Special Features of the Building

The exterior of the building is of brick and Indiana limestone construction and is distinguished by the clean lines of its functional design. It has three stories with a floor space of approximately 60,000 square feet. A sub-basement and pent house accommodate automatically controlled machinery required for the operation of the building facilities.

A special feature is a two-story pilot plant with 8,500 square feet of floor space. A truck entrance and a movable bridge-crane will make it possible to test full scale commercial food processing equipment. A number of experimental processing lines may be operated simultaneously in the study of products whose ripening season overlaps, as for example sour cherries and snap beans.

Special units will provide for studies of specific operations, such as evaporating, filtering, clarifying, drum drying, flash freezing, essence recovery, dehydration, centrifuging, spray drying. A three-story-high steam ejector provides a vacuum for some of these units.

A fully equipped machine shop will make possible the construction of small scale experimental processing equipment for use in the pilot plant.

A powerful radiation source, consisting of cobalt-60 with 4,000 curies of initial activity, will make possible research on the use of radiation as a means of food preservation. The source will also be used to study the effects of ionizing radiations on plant tissues and insects and for other purposes.

In addition to well-equipped chemical and bacteriological laboratories, other special features include:

1. Storage rooms with controlled humidities and temperatures ranging from 120 degrees down to minus 40 degrees Fahrenheit.
2. An experimental kitchen and modern taste panel booths.
3. A small animal laboratory for nutrition investigations.
4. A greenhouse on the roof of the pilot plant for plant physiology studies.
5. Air-conditioned rooms to house sensitive instruments.
6. Other special features include a drafting room, a glass-blowing and marking room, a dark room and photo laboratory, a media preparation and sterilizing room, and special laboratories for chromatography, isotope studies, micro-chemistry, analysis of pesticides, etc.

How the Building Will Be Used

The primary aims of food research at the Experiment Station at Geneva are to increase the efficiency of the food processor and the producer of raw materials, especially fruits and vegetables, so as to keep both the producer and the processor in a competitive position with other areas and to assure the consumer an adequate supply of high-quality, nutritious processed foods. The facilities provided by the new food research building will make possible the furthering of these aims by an expansion of existing projects and the initiation of new work as needed. Broad areas of investigation that are now receiving attention and that will be expanded in the new building include:

1. Pilot plant studies on the processing of fruits and vegetables.
2. Improvement of food processing operations through better control and utilization of micro-organisms.

3. Effects of processing operations on the nutritive value, quality, and safety of food products.
4. Formulation and packaging of new processed food products for market surveys.
5. Study of the effects of mechanical harvesting of fruits and vegetables on processing methods.
6. Biochemical studies on food constituents and changes that occur in them during processing and during the storage of processed foods.
7. Effects of ionizing radiations on foods and other agricultural materials.
8. The fate of pesticides, growth regulators, and herbicides applied to plants and soils, with particular regard to processed foods.
9. Regulatory analyses of commercial feeding stuffs, fertilizers, and pesticides to insure compliance with label statements.

The Importance of Food Processing to New York Agriculture

About 50 per cent of all fruits and vegetables produced on New York farms now go into processing, and the proportion is increasing year by year. The value of raw products used for canning exceeds 100 million dollars annually. Fruits and vegetables produced in this State for the freezing industry are valued at 18 million dollars annually.

In addition to processing food by canning and freezing or by other means to preserve the product, the food industry now undertakes a great deal of work previously performed in the home by producing prepared or ready-to-serve foods for the convenience of the housewife. These "built-in" services are becoming more and more important and pose many problems not only for the food processor but often for the producer as well, and will be reflected in the expanding program of food research at Geneva. Higher quality, greater convenience, and better storage stability are constantly demanded by the consumer.

The food processing industry in New York State now employs about 150,000 workers, many of them on a year-around basis, and has a payroll of approximately 600 million dollars annually.

The amount of technological skill and the extent of control required in modern commercial food processing is vastly greater than ever before. The need for comprehensive scientific research, involving both basic and applied phases, as a firm foundation for further improvements in the industry is many fold that required 25 years ago. The new food research building will be a most important facility for the further promotion of this important phase of agriculture in New York State in the interests of all, including the producer, the food processor, and above all the consumer.