

## Scientists Plan Increased Sugar Content Of Corn

Sweet corn which stays sweeter longer, which could reach Northern consumers as fresh in the winter as it is in the summer, is being developed by Pennsylvania State University scientists.

The new, higher-quality sweet corn mutant strains, in which the kernels hold their high sugar content for many days after harvest, resulted from research in carbohydrate synthesis by Dr. Roy G. Creech, assistant professor of plant breeding, and, more recently, by Dr. John D. Loerch, assistant professor of biochemistry.

Several of these mutant strains are being developed and tested by commercial breeders and the University's College of Agriculture.

During their growing lives, plants metabolize starch in certain cell tissues from simple sugars produced by the process of photosynthesis, Creech said. Sugars are continually being produced and used in respiration or converted into starch as long as photosynthesis is active.

The conversion of sugars to starches and intermediates continues even after fruits are harvested, although the production of the sugar stops, the Penn State professor said.

Standard sweet corn shipped from the South during the winter months loses most of its sugar content, and thus its good fresh taste, in the first few days after picking, Creech explained. At room temperatures, corn loses one-half of its sugars in 24 hours. At 40 degrees Fahrenheit, most of the sugar in sweet corn is converted to starch in five to eight days.

Working under a grant from the National Science Foundation, Creech and Loerch are analyzing genetic mutant strains of corn which have unusually slow sugar-to-starch conversion processes.

"We can produce corn which has as much as ten times the present sugar content," Creech said, "but three to four times the normal amount is more desirable because the kernels must maintain enough starches for germination."

The scientists are attempting to understand more about the biochemistry and genetics involved in the process of carbohydrate metabolism.

Creech and Loerch expect that a better understanding of these processes will lead to a more productive breeding program for quality improvement in many plants. The research may have other practical applications for industries concerned with carbohydrate production — cereal producers in particular — Creech said.

### ● PENB

(Continued from Page 17) Prior stressed during National Egg Month to promote egg sales.

PENB also alerted school lunch supervisors to the advantages of using more eggs in school lunch programs now.

This campaign gives extra emphasis to the 1965 National Egg Month campaign, which is ready to roll. PENB merchandising aids are in the hands of scores of retailers. Special promotions, tied in with the national campaign, are being launched by many state groups.

## EGG PRODUCERS:

# The Proof Of The Pudding Is In The Eating... So To Speak

Here is the laying flock record of  
**Mr. & Mrs. Robert Glass**  
513 Millcross Rd.,  
Lancaster.



Size of flock ..... 6080  
Type of house ..... Cage insulated  
Date housed ..... Nov. 1, 1963

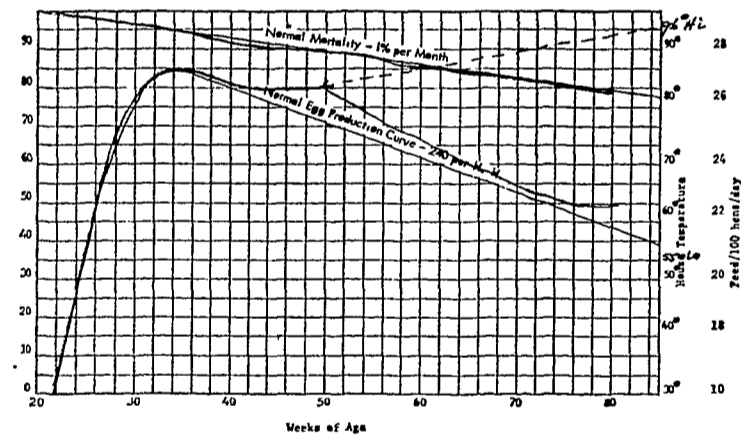
Date sold ..... Feb. 3, 1965  
Age housed ..... 20 weeks



**EARLY BIRD FEEDS**

Miller & Bushong, Inc.

Rohrerstown, Pa. - Phone Lanc. EX 2-2145



The Glass' keep accurate records.

Total eggs per hen housed for entire production period from beginning of lay until flock was sold — 273 eggs.

Total feed use from start of lay until sale of flock — 3.99 lbs. per dozen eggs produced.

**GOOD BIRDS—GOOD MANAGEMENT AND  
EARLY BIRD LAYING FEEDS ARE A  
WINNING COMBINATION FOR ANY EGG PRODUCER**

For finest poultry service anywhere, contact your Miller & Bushong Service Representative or call us direct at 392-2145.



Miller & Bushong, Inc.

Rohrerstown, Pa.

Ph. Lancaster 392-2145