

CONNECTICUT STRAIGHTNECK
A NEW, EARLY, PRODUCTIVE SUMMER SQUASH

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Connecticut Straightneck excels in the production of early fruit.

Connecticut
Agricultural Experiment Station
New Haven

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CONNECTICUT Straightneck Summer Squash is another new variety of vegetable to be produced and released by the department of Plant Breeding of the Connecticut Agricultural Experiment Station at New Haven. This variety is an inbred, selected after nine years of inbreeding from the original hybrid.

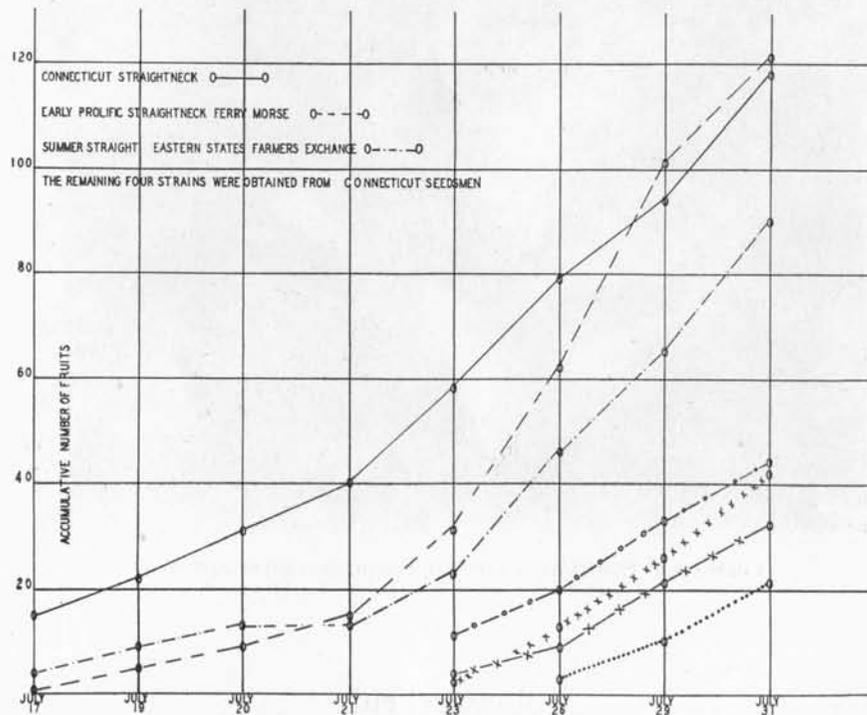


FIGURE I. YIELD OF SEVEN STRAINS OF STRAIGHTNECK SUMMER SQUASH THROUGH FIRST TWO WEEKS OF SEASON

Mr. H. R. Murray, formerly of this Station and now Professor of Horticulture at McDonald College, Quebec, Canada, made the original hybrid in 1926. He used as the female parent Giant Summer Crookneck,

and an inbred straightneck strain for the male parent. The inbred straightneck line was obtained from Dr. E. W. Sinnott who was then making a genetical study of squashes at Connecticut State College. Its meritorious characteristics were its straight neck and its cylindrically shaped fruit. The plants produced only one fruit each and were much later in blossoming than commercial varieties.

From this cross a large number of inbred lines were isolated and selections were made each year for desirable commercial characteristics. Preference was given to earliness, productivity, straight neck, cylindrically shaped fruit and uniformity. Connecticut Straightneck is the name given to one of these lines.



FIGURE 2. Fruits of many types were commonly obtained from one package of commercial seed when this breeding project was undertaken.

Ordinarily after naturally cross-pollinated plants such as corn, beets and carrots are inbred, the lines show marked loss of vigor through the first six generations. But the cucurbitaceae to which the squashes, melons and pumpkins belong do not follow this line of behavior. It is possible, moreover, to select from the inbreds types that have either large or small plant characteristics in vine, fruit or leaves. For when the original hybrid was inbred the complete range from very small to very large plant growth, as well as short to long fruit length, actually segregated out, and each has been maintained as a true breeding type.

Characteristics

Connecticut Straightneck comes from one of the small vine types which segregated out. The vine growth is about one-quarter to one-third the size of standard commercial varieties, which has certain advantages, noted in the paragraph on *special recommendations*.

The fruit grows to a length of about ten inches in seven or eight days after blossoming. It has a thick neck and the blossom end is decidedly blunt, with a large blossom scar. The color is pale lemon. There is a

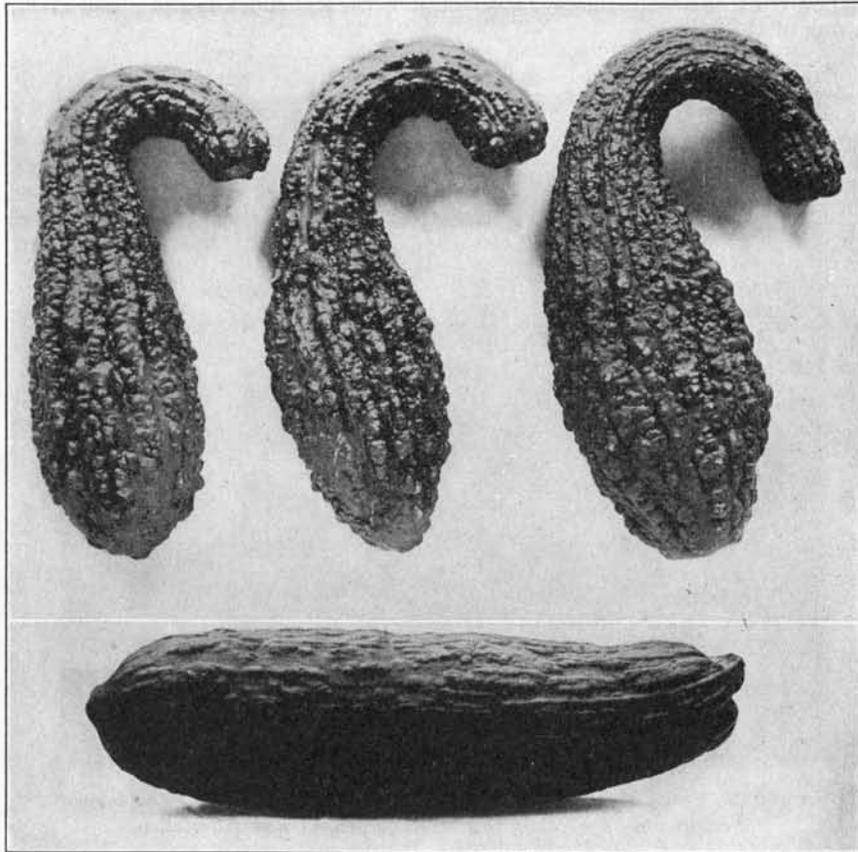


FIGURE 3. The parents of Connecticut Straightneck. Female above; Male, below.

division of opinion among growers as to the desirability of this color. Some prefer it, while others would choose a darker yellow. The lighter color does, however, give the fruit a fresher appearance.

Productivity

The ability of a strain of squash to produce an abundance of early fruit is particularly important since market gardeners realize more profit from

their early crop than from the mid-season production. Figure 1 shows the accumulative yields of seven strains of Straightneck Summer Squash through the first two weeks of the picking season on the Station Farm at Mount Carmel in 1937. These trials were planted on June 2 in rows six feet apart. Hills which were two feet apart were thinned to two plants each. The number of fruit recorded represents the total for two replications of 15 hills each. Connecticut Straightneck exceeded all strains in the production of early fruit. On the first picking date, July 17, twenty-five percent of the plants bore marketable fruit.

Adaptability

The performance, yield, earliness, growth and appearance of any strain of plants depend upon a large number of interrelated factors. Soil type and fertility, amount of rainfall, cool or hot weather, time of planting and the method of handling plants, insect and disease control, all contribute toward the success or failure of a crop. Frequently two rows of transplanted plants of the same strain show marked differences in performance. In many cases these variations can be traced directly to the different handling they received by the individuals who set them in the field.

In trials for six years, while this strain was being developed at Mount Carmel and Windsor, Connecticut Straightneck has been superior in the production of early fruit to any other commercial strain. However, this performance cannot always be expected in every locality by all growers.

Unless seedsmen take the necessary precautions to insure the purity of the strain, and prevent contamination from nearby plantings of types which cross-pollinate with this squash, the high early yield and uniformity will be lost.

The question as to whether squashes and pumpkins will cross has long been debated, and gardeners and seedsmen have recorded many observations on this point. Perhaps the most reliable information is contained in the Iowa Agricultural Experiment Station Bulletin 244, "A Systematic Study of Squashes and Pumpkins", by E. F. Castetter and A. T. Erwin. The authors point out that both *Cucurbita pepo*, the summer squashes, and *Cucurbita moschata*, the Large Cheese, and cushaws belong to the pumpkin family; while *Cucurbita maxima*, the hubbard group, are true squashes. After extensive artificial hybridization they summarize their results by stating that the true squashes, *Cucurbita maxima*, will cross readily with one branch of the pumpkin family, *Cucurbita moschata*, but not with the other, *Cucurbita pepo*. Furthermore, both branches of the pumpkin group, *Cucurbita moschata* and *Cucurbita pepo*, will cross with each other. Of course, the many varieties within these groups will cross-pollinate very readily.

Special Recommendations

We recommend closer planting of Connecticut Straightneck than of other strains. Planted in rows four feet apart, the plants will just fill the space between rows and still leave room for picking without crushing the ends of the vines. They should be from one and a half to two feet apart in the row. For maximum yield and efficiency of the land we can not urge too strongly these distances in planting. The small vine and early yield

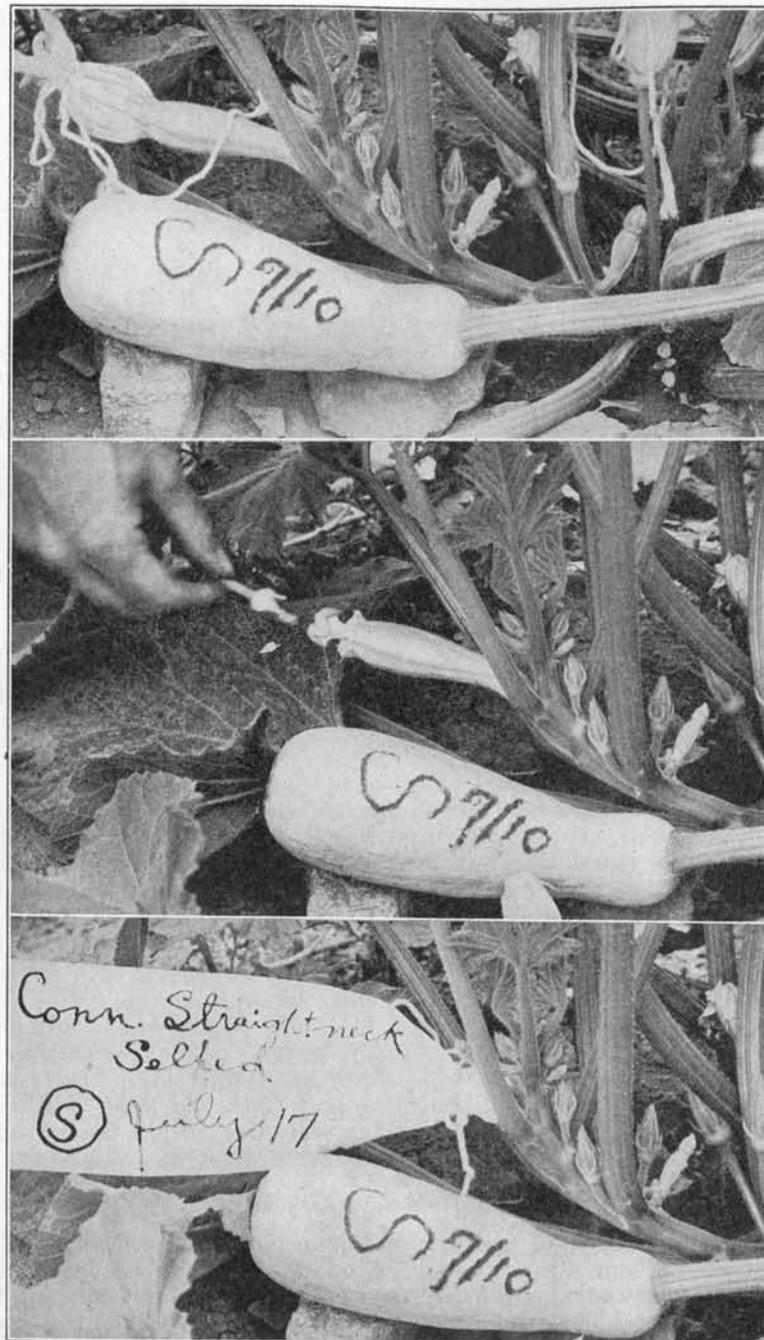


FIGURE 4. Three stages in the self-pollination process of Connecticut Straight-neck Summer squash.

of Connecticut Straightneck should make it ideal for forcing under sash.

Seed

In order that the purity of Connecticut Straightneck Squash may be kept at a high level the Connecticut Agricultural Experiment Station will

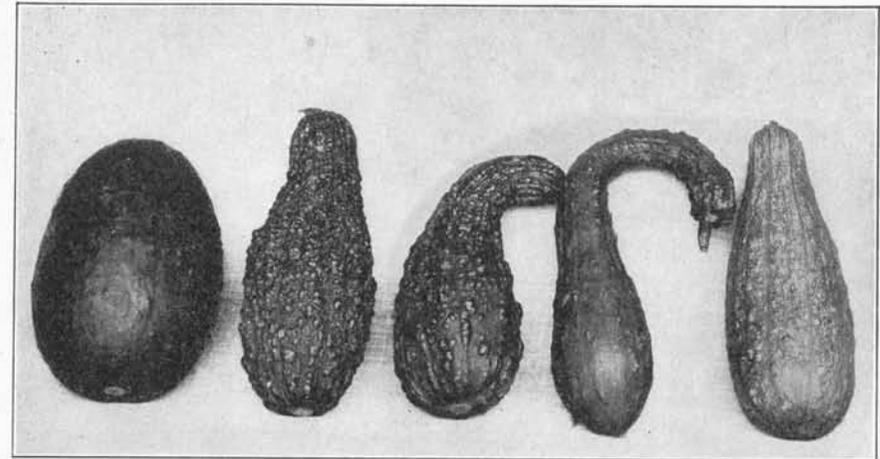


FIGURE 5. Five types of fruit found in a crop only one generation removed from hand pollinated seed. Unless the seedsmen take every precaution to provide adequate isolation for the production of seed the market gardener will find types such as these appearing in his field.

maintain hand pollinated seed to be used by seedsmen only, for the purpose of increasing their own stock seed.

Before announcing this new squash the Connecticut Agricultural Experiment Station has waited until seedsmen have increased it in amounts for distribution.

Seedsmen who are offering Connecticut Straightneck Summer Squash for sale in 1938 are:

Associated Seed Growers
Comstock, Ferre & Co.
Eastern States Farmers' Exchange
F. H. Woodruff Seed Co.
S. D. Woodruff & Sons

New Haven, Conn.
Wethersfield, Conn.
Springfield, Mass.
Milford, Conn.
Orange, Conn.

Caption for Figure 4

- I. Both female and male blossoms are tied with string the evening before they open. This prevents insects from visiting either flower and contaminating it with pollen from undesirable types.
- II. The corolla of both blossoms have been removed and the male blossom is rubbed over the stigma of the female blossom.
- III. A paper bag is tied over the female blossom after it is pollinated to prevent contamination.

An S is scratched on the self-pollinated fruit together with the date that it was pollinated. This is the most reliable way of marking selfed fruit.