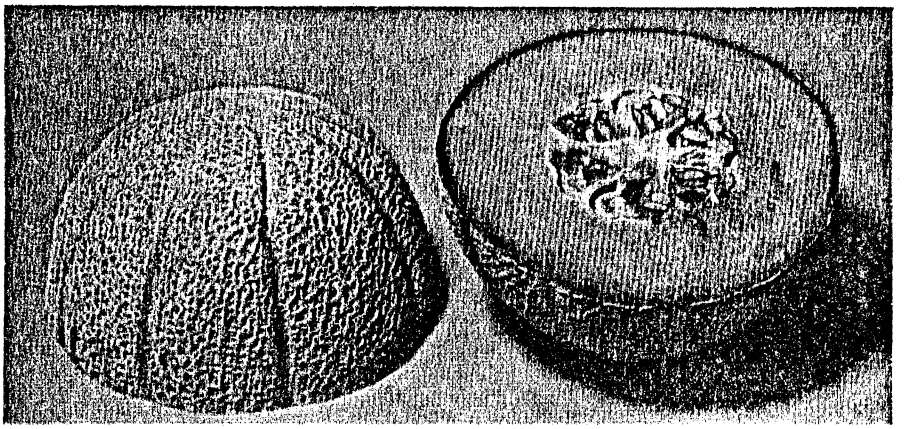


# GULFCOAST—a sweet cantaloupe for the produce chain store market

JOSEPH D. NORTON*

GULFCOAST, a new cantaloupe variety adapted for growing in Southeastern United States, has been released by Auburn University Agricultural Experiment Station. It has relatively high resistance to downy mildew (*Pseudoperonospora cubensis*) and powdery mildew (*Erysiphe cichoraceārum*) and high resistance to gummy stem blight (*Mycospharella citrullina*). The variety produces high yields of excellent quality fruit suitable for packing for the commercial market.

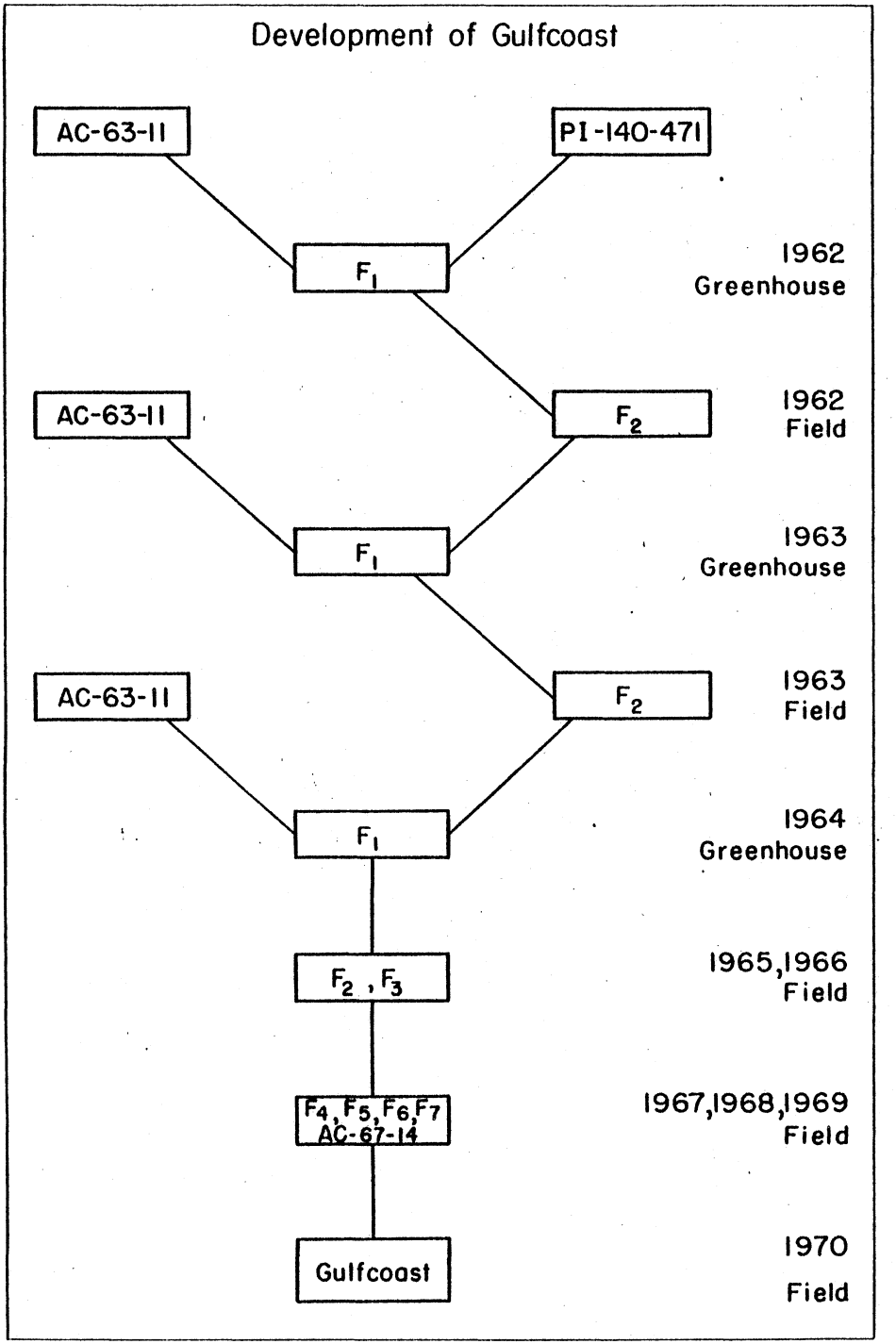
Prevalence of foliar diseases, particularly downy mildew and gummy stem blight, and susceptibility of existing varieties to these diseases has discouraged the growing of cantaloupes in the Southeast. Introduction of the high quality, disease resistant variety Southland *(3)* in 1970 demonstrated that high quality fruits could be produced in this humid region. Because of its large fruit size, Southland is not suitable for packing for the commercial market. However, Gulfcoast produces smaller fruits that meet needs of the commercial market.

* Associate Professor, Department of Horticulture.

## ORIGIN

Gulfcoast originated at Auburn from a program of backcrossing and inbreeding to obtain resistance to gummy stem blight, downy mildew, and powdery mildew. It is an inbred line from the cross AC-63-11 x PI 140471, as shown by the pedigree on page 2. Following the cross, a backcrossing and disease screening program was followed with selection of dis-

AGRICULTURAL EXPERIMENT STATION
E. V. Smith, *Director* AUBURN UNIVERSITY Auburn, Alabama


Development of Gulfcoast
AC-63-11
PI-140-471
F1
1962
Greenhouse
AC-63-11
F2
1962
Field
F1
1963
Greenhouse
AC-63-11
F2
1963
Field
F1
1964
Greenhouse
F2 , F3
1965,1966
Field
F4, F5, F6, F7
AC-67-14
1967,1968,1969
Field
Gulfcoast
1970
Field

ease resistant seedlings that produced high quality fruit.

## DISEASE RESISTANCE

Gulfcoast has been rated for resistance to gummy stem blight, downy mildew, and powdery mildew in tests at several locations in Alabama and other Southern States. The high level of resistance to gummy stem blight, secured from PI 140471 *(2,4)*, was incorporated into the breeding lines through a screening program that utilized an incubation chamber and greenhouse to eliminate susceptible plants from the populations. Resistance to downy mildew and powdery mildew was obtained from Georgia 47 and Florisun through AC-63-11 *(1)*. Gulfcoast plants exhibited excellent general disease resistance in field plantings during 1967-70.

## FRUIT

The fruits of Gulfcoast are mostly round or round-oval in shape, although many are more rounded than round-oval. They are slightly ribbed and well covered with a medium net. Fruit size varies at different fertility levels and in different production areas, but averages close to 2¾ pounds with a diameter of 5-6 inches, see table. Adequate size for the commercial pack of 24 and 27 size melons may be assured with adequate fertility and irrigation. Since this is smaller than "Jumbo" melons, the grower should either market them with wholesale produce buyers or with other outlets for high quality fruit.

The fruit are very firm and adapted to handling in commercial markets. Flesh is firm at the full slip stage, but it softens to an excellent condition for dessert quality in 3 to 4 days.

The flesh is thick, deep orange in color, and of excellent flavor and aroma. Seed cavity is small. The fruit matures in 70-75 days, approximately the same as Hales Best Jumbo and Southland.

Gulfcoast has been grown as AC-67-14 in trials at Auburn and at a number of substations of the Auburn University Agricultural Experiment Station, in the Southern Cooperative Cantaloupe Variety Trials in other Southeastern States, and in demonstration plantings by commercial growers.

Average Yield, Fruit Weight, and Soluble Solids of Cantaloupe Varieties Grown in Five Alabama Locations, 1964-1970

| Variety | Average all locations | | |
|---|---|---|---|
| | Yield per acre | Fruit weight | Soluble solids |
| | *Lb.* | *Lb.* | *Lb.* |
| Gulfcoast* | 18,347 | 2.72 | 12.7 |
| Southland | 18,838 | 3.02 | 11.8 |
| Hales Best Jumbo | 10,288 | 2.77 | 6.6 |
| Edisto 47 | 17,180 | 3.05 | 10.2 |

* Averages for Gulfcoast are for 1967, 1968, 1969, and 1970 only.

Gulfcoast compares favorably with established varieties in shipping quality and edible quality as indicated by taste and soluble solids, see table.

## ACKNOWLEDGMENTS

The author gratefully acknowledges the assistance of Grover Sowell, Jr., Pathologist, USDA Southeastern Plant Introduction Station, Experiment, Georgia, for discovery of resistance to *Mycosphaerella citrullina* and for counseling in screening techniques with the organism. The mode of inheritance of resistance to *Mycosphaerella citrullina* was determined by Krishna Prasad, former graduate assistant, Department of Horticulture, Auburn University. Essential assistance was rendered by C. C. Carlton and K. C. Short, Chilton Area Horticulture Substation, in increasing seed for grower trials and conducting variety trials.

Valuable assistance was rendered by G. T. Sharman, Foundation Seed Stocks Farm; Jordan Langford, Plant Breeding Unit; M. H. Hollingsworth, North Alabama Horticulture Substation; H. F. Yates and J. E. Barrett, Gulf Coast Substation; and C. A. Brogden, Wiregrass Substation, in increasing seed and conducting yield trials.

The assistance of participants in the Southern Cooperative Cantaloupe Variety Trials is also acknowledged.

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