

Research Note

FRUIT CHARACTERISTICS OF 18 PUMMELO VARIETIES WITH POTENTIAL FOR COMMERCIAL PRODUCTION IN PUERTO RICO¹

The pummelo is the largest of all citrus fruits, normally attaining 10 to 30 cm in diameter and 1 to 5 kg in weight. Fruits of more than 60 cm in diameter and 10 kg in weight have been reported.² Fruit shape varies from round, oblate or globose to pyriform, and may be flattened at one or both ends, sometimes having a neck at the stem end. At maturity the surface of the fruit is light green to yellow with numerous dots corresponding to the oil glands. The rind is 1 to 3 cm thick, soft and white to pink in color. Segments have a thick membrane enclosing the pulp, which consists of large vesicles containing variable amounts of juice. Pulp color varies from white to pink with greenish or reddish tones. Seeds, if present, are large and have a leathery coat.

Trees are grown mainly as a curiosity in backyards, but the fruit is largely unknown to the general public. Ongoing efforts by the AES and other institutions are aimed at determining the adaptability of this fruit to local conditions and making the best varieties available to farmers and the general public.

This note describes fruit characteristics of 18 pummelo varieties planted in 1980 at the Adjuntas Substation in the central mountainous region of Puerto Rico. The description is based on data collected in 1984, 1985 and 1986. All data except °Brix were obtained by examining each characteristic in 10 fruits collected at random during each crop year. Brix data were obtained in 1984 from four replicates of 10 fruits of each vari-

ety. Data on yield and other parameters are given in a separate publication.³ Information on external and internal fruit characteristics, and on juice characteristics, follows:

Light Pink

Variety obtained from USDA Subtropical Research Station, Miami, Florida. Fruit 1.46 kg in weight, round to slightly globose, 16.2 cm and 14.4 cm in greater and lesser diameter. Rind yellow, oil glands medium, albedo white, thin to medium thick. Pulp pale green to cream white, 14 to 16 segments, seedy, central axis solid. Juice vesicles medium, juice abundant, sour, 11.5° Brix.

"Dry" Pink

Variety obtained from USDA Subtropical Research Station, Miami, Florida. Fruit 1.66 kg in weight, ovoid to globose, 16.5 cm and 15.7 cm in greater and lesser diameter. Rind bright yellow, oil glands medium, albedo white, medium thick. Pulp pale green to cream white, 14 to 16 segments, seedy, central axis solid. Juice vesicles medium, juice abundant, sour, 10.5° Brix.

Thong Dee White

Variety obtained from Monte Alto, Texas, originally from Thailand. Fruit 1.28 kg in weight, round to ovoid, 14.7 cm and 14.0 cm in greater and lesser diameter. Rind greenish yellow, oil glands large, albedo white, thick. Pulp cream-white, 12 to

¹Manuscript submitted to the Editorial Board 15 August 1989.

²Martin, F. W. and W. C. Cooper, 1977. Cultivation of Neglected Tropical Fruits with Promise: The Pummelo Publication ARS-157.

³Cedeño-Maldonado, A., W. González and E. Fontanet, 1989. Performance of Pummelo Clones in the Central Mountain Region of Puerto Rico, *J. Agric. Univ. P.R.*, 74(3): 299-305.

14 segments, seedy, central axis solid. Juice vesicles large, juice abundant, sour, 95° Brix.

"Wet" Pink

Variety obtained from USDA, Subtropical Research Station, Miami, Florida. Fruit 1.48 kg in weight, round to ovoid, 15.7 cm and 15.8 cm in greater and lesser diameter. Rind pale yellow, oil glands large and raised, albedo white with pink tinge, thin. Pulp pale green to cream white, 10 to 12 segments, seedy. Central axis solid. Juice vesicles small, juice abundant, sour, 10.8° Brix.

Red 16023

Variety obtained from Monte Alto, Texas. Fruit 1.20 kg, round to ovoid, 15.9 cm and 17.1 cm in greater and lesser diameter. Rind pale yellow, oil glands large, albedo pink with cream interior, thick. Pulp, light pink, 12 to 14 segments, seedy, central axis solid or open. Juice vesicles small, juice scanty, slightly sweet, 10.4° Brix.

Reinking

Variety obtained from USDA Date and Citrus Station, Indio, California. Fruit 1.38 kg, pear shape, 16.4 cm and 19.5 cm in greater and lesser diameter. Rind greenish yellow, oil glands large, albedo white, thick. Pulp cream white, 14 to 16 segments seedy, central axis solid. Juice vesicles large, juice abundant, very sour, 10.2° Brix.

Green Favorite

Variety obtained from USDA Subtropical Research Station, Miami, Florida. Fruit 1.46 kg, bell shape with neck tip, 14.4 cm and 15.0 cm in greater and lesser diameter. Rind greenish yellow, oil glands large, albedo white, medium thick. Pulp cream white with greenish tinge, 12 to 14 segments, seedy, central axis solid or hollow. Juice vesicles large, soft, juice abundant, very sour, 9.7° Brix.

Thong Dee

Variety obtained from Orlando, Florida. Fruit 1.23 kg, round to globose, 16.2 cm and 16.6 in greater and lesser diameter. Rind pale yellow, oil glands large, albedo pink,

thick. Pulp pink with yellow interior, 12 to 14 segments, seedy, central axis solid or hollow. Juice vesicles medium, juice abundant, very sour, 9.6° Brix.

Pink 9551

Variety obtained from Subtropical Research Station, Miami, Florida. Fruit 1.51 kg, round to oblate with flattened tip and base, 17.1 cm and 13.1 cm in greater and lesser diameter. Rind greenish yellow, albedo pink, thin. Pulp intense pink, 14 to 16 segments, seedy, central axis solid. Juice vesicles small, juice scanty, sweet, 10.9° Brix.

Siamese

Variety obtained from Orlando, Florida. Fruit 1.18 kg, pear shape with neck, 14.0 cm and 16.5 cm in greater and lesser diameter. Rind pale yellow, albedo white, thin. Pulp greenish to cream, 12 to 14 segments, seedy, central axis solid. Juice vesicles medium, juice abundant, sour, 10.1° Brix.

African Seedling

Variety obtained from USDA Date and Citrus Station, Indio, California. Fruit 1.07 kg, round to globose, 15.1 cm and 15.1 cm in greater and lesser diameter. Rind pale yellow, oil glands small, albedo pink, medium thick. Pulp pink, 14 to 16 segments, seedy, central axis solid. Juice vesicles large, juice scanty, sweet, 11.6° Brix.

Tresca

Variety obtained from the Puerto Rico Agricultural Experiment Station, Isabela, P.R. Fruit 1.54 kg, round with flattened tip, 15.8 cm and 15.1 cm in greater and lesser diameter. Rind pale yellow, oil glands small, albedo pink, thin. Pulp pink with cream interior, 14 to 16 segments, seedy, central axis, solid or hollow, juice vesicles large, juice abundant, sour, 10.2° Brix.

Father Jerome

Variety obtained from Mrs. P. Gorman, Miami, Florida. Fruit 0.87 kg, round, 16.5 cm and 15.4 cm in greater and lesser diameter. Rind, pale yellow with pink tinge, oil glands small, albedo pink, medium thick. Pulp yellow green with pink tinge, 10 to 12

segments, seedy, central axis solid. Juice vesicles large, juice abundant, medium sweet, 10.2° Brix.

Pink 9552

Variety obtained from USDA Subtropical Research Station, Miami, Florida. Fruit 1.67 kg, round, 16.2 cm and 15.9 cm in greater and lesser diameter. Rind pale yellow, oil glands small, albedo white with pink tinge, medium thick. Pulp cream, yellow with green tinge, 14 to 16 segments, seedy, central axis solid. Juice vesicles medium, juice abundant, slightly sweet, 9.9° Brix.

Chinese

Variety obtained from Orlando, Florida. Fruit 1.9 kg, round to oblate, 17.6 cm and 15.8 in greater and lesser diameter. Rind pale yellow, oil glands small, albedo white, thin. Pulp cream-white, 14 to 16 segments, seedy, central axis hollow. Juice vesicles medium, juice abundant, slightly sweet, 8.5° Brix.

Ogami

Variety obtained from Orlando, Florida, originally from Japan. Fruit 1.88 kg, oblate with flattened tip and base, 17.7 cm and 14.3 cm in greater and lesser diameter. Rind yellow, oil glands small, albedo pink, thin. Pulp pink, 14 to 16 segments, seedy, central axis

hollow. Juice vesicles medium, juice abundant, slightly sweet, 8.5° Brix.

Isabela Hybrid

Variety obtained from the Puerto Rico Agricultural Experiment Station, Isabela, P.R. Fruit 1.21 kg, round with flattened tip, 13.5 cm and 13.2 cm in greater and lesser diameter. Rind greenish yellow, oil glands small, albedo pink, thin. Pulp pink, 12 to 14 segments, seeds scanty, central axis hollow. Juice vesicles large, juice abundant, semi-sweet, 11.1° Brix.

White 16026

Variety obtained from the USDA Subtropical Research Station, Miami, Florida. Fruit 1.37 kg, round with flattened tip, 13.9 cm and 13.7 cm in greater and lesser diameter. Rind pale yellow, oil glands small, albedo white, medium thick. Pulp cream-white, 14 to 16 segments; seedy, central axis solid or hollow. Juice vesicles large, juice abundant, sour, 11.8° Brix.

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