Table 3. Values of "U.S. Standard Grades of Quality" of canned tomato juice and quality attributes (1). (Average sample of three 303 × 406 cans.) Raw product grown at the Vegetable Crops Branch, Fremont, Ohio; processing at Columbus, Ohio.

Cultivar	Score						Soluble	Titratable	
	Color (30)	Consistency (15)	Defects (15)	Flavor (40)	Total $(max = 100)$	U.S. grade	solids (°Brix)	acidity (%)	Gross viscosity
					1981				
Ohio 7814	28	13	15	35	91	А	6.2	0.46	143
Heinz 2653	28	13	15	35	91	А	5.5	0.34	50
Campbell 37	28	13	15	38	94	А	5.6	0.29	65
					1982				
Ohio 7814	27	15	15	37	94	А	5.8	0.86	114
Heinz 2653	26	15	15	36	92	А	4.8	0.68	40
Campbell 37	26	15	15	36	92	А	5.7	0.50	57



Fig. 2. 'Ohio 7814' at maturity as grown for machine harvest (vine opened up to display fruit).



Fig. 3. Fruits of 'Ohio 7814'; average weight = 65 g (2.3 oz).

available to seedsmen from the Department of Horticulture, OSU-OARDC, Wooster, OH 44691.

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# 'Sugarlee' Watermelon

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'Sugarlee' watermelon [*Citrullus lanatus* (Thunb.) Matsum. & Nakai] is an early season cultivar that produces high-quality fruits suitable for shipping or local market sales. It is resistant to anthracnose, caused by race 1 of *Colletotrichum lagenarium* (Pass.) Ellis & Halsted, and fusarium wilt caused by *Fu-sarium oxysporum* Schlect. f. sp. *niveum* (E.F. Sm.) Snyd. & Hans. Because it matures early, 'Sugarlee' fits well into Florida's commercial production program and might be used in conjunction with 'Dixielee' to lengthen the shipping season for any given production area or grower. 'Sugarlee' has performed well in the Southern Cooperative Watermelon Trials during the period 1977–1981 and is welladapted throughout most of the watermelon production areas in the eastern United States. **Origin** 

'Sugarlee' originated from a series of crosses

and backcrosses similar to that from which 'Dixieleee' was derived, which included the highly fusarium-wilt-resistant Texas W5 and 'Summit' and the moderately resistant 'Fairfax' and 'WR Graybelle' (Fig. 1). Its pedigree differs from that of 'Dixielee' by the inclusion of both 'Charleston Gray' and 'Crimson Sweet' and the exclusion of the intense-red-fleshed 'Peacock'.

Both parental lines of 'Sugarlee' evolved from series of similar origin. Included in their genealogy were the cultivars 'Summit', 'Charleston Gray', 'Fairfax', 'Crimson Sweet', and 'WR Graybelle' and the breeding line Texas W5. The parental cross was made in 1968 and single plant selections were made for the next 7 generations (1969–1975). Seed from 6 selections of the  $F_7$  were composited and planted in isolation in 1976. Seed from this planting was designated Florida 77-2 and distributed widely for testing in Florida and other states in 1977, 1978, 1979, 1980, and 1981. Foundation seed of 'Sugarlee' originated from this source.

Cultivars in the pedigree of 'Sugarlee' have been described adequately in release notes or circulars. Texas W5, which was entered in

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W5 = Texas W5

 $F_{1,7}$  = Filial generation following a cross (from self pollination except as noted)

 $BC_1 = First backcross generation$ 

Fig. 1. Pedigree of 'Sugarlee' watermelon.

the 1961 Southern Regional Watermelon Trials by H.C. Mohr, is highly resistant to fusarium wilt but susceptible to anthracnose; it produces large, round, solid green fruits with tough rind, excellent flesh qualities, high sugar content, and white seeds.

### Description

Plants of 'Sugarlee' are moderately vig-



In replicated trials at Leesburg (4 years) and Immokalee (3 years), mean and maxi-



Fig. 2. 'Sugarlee' watermelon.

mum yields for 'Sugarlee' (61.7 and 69.4 MT/ha, respectively) compared favorably with those for 'Crimson Sweet' (65.6 and 78.9), 'Charleston Gray' (70.2 and 83.0) and 'Jubilee' (63.6 and 80.2). Mean melon weights for these trials were as follows: 'Sugarlee' (7.2 kg), 'Crimson Sweet' (7.9), 'Charleston Gray' (9.1), and 'Jubilee' (9.4). Sugar content of the juice of 'Sugarlee' (10.2% mean soluble solids) was not as high as that of 'Dixielee' (10.6%), but was higher than that of 'Charleston Gray' (9.0%), 'Crimson Sweet' (9.6%), and 'Jubilee' (8.6%).

Special attributes of 'Sugarlee' that have gained the favor of test growers are its earliness [several growers have noted that it is earlier than any of the 3 major cultivars ('Crimson Sweet', 'Jubilee', and 'Charleston Gray') currently being grown in Florida], excellent internal quality, especially its freedom from whiteheart and hollowheart, and its characteristic of holding prime quality fruit on the vine for a reasonably long period. Other desirable qualities of 'Sugarlee' are its good shipping characteristics (hard, tough rind and firm flesh), adequate fruit yields, and resistance to anthracnose and fusarium wilt.

## Availability

Foundation seed of 'Sugarlee' is available to commercial seedsmen from the Florida Foundation Seed Producers, Inc., P.O. Box 309, Greenwood, FL 32443. Limited amounts of breeder seed can be obtained by request to the senior author.