

HORTICULTURE FIELD DAY REPORT - 1998

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HYBRID WATERMELON EVALUATIONS FOR EAST TEXAS - 1996

M. L. Baker, D. R. Earhart, and F. J. Dainello

Background. Watermelons are adapted to a wide range of growing conditions. Texas annually ranks first in watermelon production acreage in the United States. East Texas is considered as Texas' major production area with an estimated 25,000 acres. East and Northeast Texas produce approximately one-third of the state's watermelons, which are mainly hybrids. The major shipment centers are around Henderson, Texarkana, Dallas, and Houston for East Texas, Bowie County in Northeast Texas, and Comanche County in Central Texas. Eighty percent of the melons are marketed in June, July, August, and September. The East Texas watermelon production area is characterized by small scale farming operations. Improved varieties showing greater yield, earlier maturity, higher quality, and improved disease resistance/tolerance open up new local market potentials for such operations.

Selected hybrid watermelons were evaluated in a 1996 study. The overall objective was to obtain data on quantitative and qualitative characteristics to be used by producers and University personnel in making decisions on variety adaptability to East Texas. Transplants were grown in the greenhouse each year using plastic pots measuring 2 in. X 2.5 in. X 3 in. filled with a commercial peat-vermiculite growing media. The statistical design used was a randomized complete block with three replications. In the field, raised beds were covered with black plastic mulch 60 inches wide and 1.5 mil thick. Drip tape was laid beneath the plastic for irrigation. No chemical controls were used in any of the studies. The 1996 study was on the Texas A&M University Research and Extension Center at Overton property on a Bowie fine sandy loam soil. Transplants were planted on eight feet plastic covered beds with three feet in row spacing on 13 May. Fertilization was 700 lb 13-13-13/ac banded 24 April. Harvests were 9 and 15 July 1996.

Research Findings. 'Big Stripe' produced the highest yields with 74,617 lbs/ac; 'Desert Storm' had the second highest yields with 67,968 lbs/ac; and 'Summer Flavor 700' had the third highest yields with 65,000 lbs/ac. 'Summer Gold' produced the largest percent of watermelons over 30 lbs (33%); and 'WX-7' produced the largest percent of watermelons in the 20-24 lbs range with the highest total of large melons over 20 lbs. 'Summer Flavor 710' produced the highest soluble solids (16.2%) with 'Super Gold' second in soluble solids (16.1%). Other promising entries were 'Summer Flavor 420', 'Patriot', 'LF-1390' and 'Summer Flavor 510'.

Application. Continued profitability of watermelon production in the East Texas area is contingent upon development of watermelon cultivars that demonstrate adaptability to this area.

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1996 Texas A&M University Statewide Hybrid Watermelon Trials at Overton

| Entry | Seed Source ^z | Total yield (lbs/A) | % Fruit harvested / Weight grade (lbs) | | | | Brix TC |
|---------------------|--------------------------|---------------------|--|-------------|-------------|-------------|--------------|
| | | | <30 | 20-29 | 11-19 | >10 | |
| Big Stripe | 5 | 74,617 | 16.2 | 48.6 | 33.9 | 1.3 | 15.7 |
| Desert Storm | 5 | 67,968 | 11.6 | 42.9 | 43.8 | 1.7 | 15.5 |
| Summer Flavor 700 | 1 | 65,069 | 0.0 | 62.2 | 37.8 | 0.0 | 12.8 |
| Summer Gold | 5 | 60,880 | 33.0 | 42.9 | 24.1 | 1.2 | 15.9 |
| Summer Flavor 420 | 1 | 57,732 | 0.0 | 42.8 | 55.3 | 1.9 | 14.9 |
| Patriot | 5 | 55,834 | 7.8 | 57.3 | 32.6 | 2.3 | 13.8 |
| WX-7 | 5 | 54,503 | 11.3 | 69.5 | 19.2 | 0.0 | 13.0 |
| LF 1390 | 3 | 53,766 | 0.0 | 4.9 | 84.8 | 10.3 | 14.1 |
| Allsweet | 4 | 53,453 | 0.0 | 37.6 | 62.4 | 0.0 | 13.7 |
| Summer Flavor 510 | 1 | 50,071 | 52.8 | 47.2 | 0.0 | 0.0 | 15.1 |
| Summer Flavor 710 | 1 | 49,530 | 22.0 | 49.4 | 28.6 | 0.0 | 16.2 |
| Super Gold | 5 | 48,400 | 0.0 | 37.8 | 56.1 | 6.1 | 16.1 |
| Baron | 2 | 46,796 | 0.0 | 34.9 | 65.1 | 0.0 | 13.9 |
| Summer Flavor 500 | 1 | 46,603 | 29.0 | 46.6 | 24.4 | 0.0 | 12.2 |
| WX 5 | 5 | 41,463 | 0.0 | 21.5 | 62.3 | 16.2 | 14.6 |
| LF 1408 | 3 | 38,428 | 0.0 | 29.3 | 51.2 | 19.5 | 12.1 |
| LF 1402 | 3 | 34,022 | 0.0 | 17.3 | 78.0 | 4.7 | 14.6 |
| LF 1832 | 3 | 31,593 | 0.0 | 41.4 | 45.3 | 13.3 | 16.3 |
| SF 662 | 3 | 30,027 | 0.0 | 0.0 | 0.0 | 100.0 | 14.0 |
| SF 460 | 3 | 25,723 | 0.0 | 0.0 | 57.1 | 42.9 | 17.4 |
| LF 1789 | 3 | 17,724 | 0.0 | 15.8 | 84.2 | 0.0 | 12.7 |
| LSD (P=0.05) | | 26,499 | 16.1 | 35.2 | 38.0 | 22.5 | ----- |

^zSeed Source: 1 - Abbott & Cobb; 2 - American Sunmelon; 3 - CDM Fast Track; 4 - Sunseeds; 5 - Willhite

Establishment: Transplanted on 8 ft plastic covered raised beds with 3 ft in-row spacing on 13 May

Design: Randomized complete block with three replications

Harvest: 9, 15 July

Irrigation: Drip as needed

Fertilization: 700 lbs 13-13-13/ac banded 24 April