

# **PUBLICATIONS**

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# **FIELD DAY REPORT - 1992**

**Texas A&M University Agricultural Research and  
Extension Center  
at Overton**

**Texas Agricultural Experiment Station  
Texas Agricultural Extension Service**

**Overton, Texas**

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## HYBRID WATERMELON EVALUATIONS - 1991

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**Background.** Watermelons are available late April to mid-December, but 80% of product is marketed in June, July, and August. Texas is second in production of the many states involved in growing watermelons. There are as many as 50 varieties available. Grades for watermelons are U.S. Fancy, U.S. No. 1, and U.S. No. 2. The grades conform to the USDA's policy of establishing uniform grade names for fresh fruits and vegetables.

East Texas produces approximately one-third of the state's watermelons consisting mostly of hybrids. In a cooperative effort between the Texas Agricultural Experiment Station and the Texas Agricultural Extension Service, a watermelon evaluation trial consisting of 17 hybrids was established at the Texas A&M University Agricultural Research and Extension Center, Overton, TX, on April 5 utilizing a randomized complete block of 3 reps and transplants seeded in the greenhouse March 7, 1991. The area was bedded on 6.6 ft. centers and each bed was covered with biodegradable plastic mulch. Irrigation was by drip.

**Research Findings.** Data were obtained from a once-over harvest (all sizes harvested including mature and immature) on July 1 from 17 hybrid watermelons to determine yield per acre (lbs), watermelon number per acre, average melon wt. (lbs), and soluble solids (%). Size was important because larger melons had more edible flesh proportionate to weight. 'Mirage' produced the highest yield of 68,925 lbs/acre, averaging 19 lbs per melon with 10.1% soluble solids. 'Star Brite' tested the highest for soluble solids with 10.3% while producing 54,477 lbs/acre averaging 19 lbs per melon. 'Huck Finn' averaged the largest melon weight in lbs with an average melon weight of 20 lbs. Good, crisp red flesh colors were characteristic of most varieties evaluated. All varieties were tested for soluble solids at harvest in the field since watermelon sugar content does not increase after harvest. When stored at warmer temperatures, color did deepen. Varieties harvested were not mealy or watersoaked and mature seeds were hard with coloring from white to black. The results are presented in the following table.

**Application.** Demand for high sugar content is becoming increasingly important to consumers. Pre-cut sales are growing in popularity because of size flexibility and the ability of the consumer to identify watermelon quality with firm, crisp flesh showing bright red, scarlet, orange or yellow color and dark mature seeds. Five hybrids tested showed 10.0 % soluble solids or higher at harvest. The food industry could utilize these varieties as slices, quarters, halves and other-size pieces of watermelon for customers who, because of family size or preference, choose

not to buy a whole watermelon. Also, East Texas watermelon producers should look at these data to determine the opportunity for sales of longer varieties with good qualities mentioned which lend themselves to retailers interested in slicing for special pre-cut sales.

The majority of hybrids evaluated showed exceptional production potential. With further varietal evaluations, new cultural practices, and sustainable production methods, East Texas producers could increase their current 33% of the overall watermelon production in the state.

Table 1. TAEX/TAES Trials: Spring 1991 Watermelon Evaluations, Overton, Texas

| Variety               | Seed source | Yield per acre (lbs) | Melon number per acre | Average melon wt. (lbs) | Soluble solids (%) |
|-----------------------|-------------|----------------------|-----------------------|-------------------------|--------------------|
| <u>HYBRID TRIAL</u>   |             |                      |                       |                         |                    |
| Mirage                | 2           | 68925                | 3721                  | 19.0                    | 10.1               |
| ACX 6019              | 1           | 59632                | 3449                  | 17.3                    | 10.3               |
| ACX 1363              | 1           | 55657                | 3086                  | 18.0                    | 9.6                |
| Star Brite (XPH-6004) | 2           | 54477                | 2995                  | 19.0                    | 10.3               |
| Summer Flavor 600     | 1           | 53742                | 3449                  | 17.0                    | 10.0               |
| Royal Jubilee         | 4           | 52172                | 2813                  | 18.2                    | 9.3                |
| ACX 1366              | 1           | 48551                | 2813                  | 17.2                    | 8.8                |
| Royal Star            | 4           | 47399                | 2450                  | 19.3                    | 9.3                |
| Fiesta                | 3           | 45311                | 3267                  | 14.0                    | 9.1                |
| Huck Finn             | 3           | 45221                | 2269                  | 20.0                    | 9.7                |
| Royal Sweet           | 4           | 40556                | 2360                  | 18.0                    | 9.7                |
| ACX 6029              | 1           | 40338                | 2541                  | 16.0                    | 10.1               |
| Royal Majesty         | 4           | 39839                | 2813                  | 13.4                    | 9.3                |
| Summer Flavor 610     | 1           | 39748                | 2450                  | 16.3                    | 7.3                |
| Regency               | 4           | 35020                | 1997                  | 17.2                    | 9.3                |
| Summer Flavor 200     | 1           | 25927                | 1815                  | 14.0                    | 8.9                |
| All Sweet             | 3           | 25219                | 1724                  | 15.4                    | 7.3                |

Data obtained for trial from one harvest: July 1, 1991

Seed Source: 1 - Abbott & Cobb; 2 - Asgrow; 3 - Northrup King; 4 - Pctoseed

Design: Randomized complete block with 3 reps

Transplanting Date: April 5

Location: Texas A&M University Agricultural Research and Extension Center, Overton, TX