

Vegetable Production & Marketing

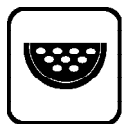


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Outstanding Yields Harvested from the TAEX Seedless Watermelon Trials in the Winter Garden

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The hot dry weather conditions prevalent in the Winter Garden area during the 1996 watermelon season were very favorable for the growth and development of watermelon plants, and unfavorable for the development of diseases. As a result of optimum growing conditions, good management practices, and the absence of disease pressure, extremely high yields of quality melons were produced in our seedless watermelon trial conducted on the Willoughby Farms at Batesville.

The trial was transplant-established on April 11, 1996, in a randomized block design having 3 replicates per entry. Plants were field-set at 30-inch in-row spacing on 80-inch-wide black-plastic-mulched raised beds. Drip irrigation was used to supply supplemental water needs. The trial was once-over harvested on June 27.

In the past, growers have been reluctant to grow seedless watermelons because of the concerns over high production costs, small fruit size and subsequent yield, and questionable market potential. The concerns are no longer valid, as evidenced by rapidly expanding markets and the availability of improved genetics in these types of melons, which enable high yields of large fruit. Although production costs still remain high, the increased yield and market potential significantly offset production cost.

Evidence of the improved fruit size and yield potential now available in seedless watermelons can be found in the results of this trial, which are summarized in Table 1 (fruit varietal characteristics are presented in Table 2). As shown in Table 1, all 17 of the entries yielded in excess of 60,000 lbs/A (three times the state average for seeded watermelons). The highest yielding lines in this trial were Tri X Shadow (115,599 lbs/A) and Gem Dandy (105,331 lbs/A). Two other entries also exceeded 100,000 lbs marketable fruit/A: Premier (104,983 lbs) and Summer Sweet 5544 (104,809 lbs). Historically, seedless watermelons produced fruit in the 12 to 15 lb average fruit weight range. Summer Sweet 5544 and Summer Sweet 5244 produced 6 percent of their fruit, with an average size of 25 to 29 lbs.

Equally impressive yields were obtained from the standard or hybrid watermelon trial conducted in Batesville. The results from that trial will be presented in the next *VPM News*.

For additional information on the Batesville seedless watermelon trial, contact Dr. Larry Stein, Extension Horticulturist at the TAMU-AREC in Uvalde (210/278-9151) or Mr. Kenneth White, County Extension Agent for Uvalde County (210/278-6661).

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TABLE 1. 1996 STATEWIDE TRIPLOID (SEEDLESS) WATERMELON TRIALS, BATESVILLE, TEXAS

ENTRY	SEED SOURCE	MKTBL YLD (LBS/A)	% FRUIT HARVEST / FRUIT SIZE GRADE - (NO. FRUIT)						% CULLS
			> 30	25-29	20-24	15-20	10-14	< 10	
TRI X SHADOW	(2)	111,599	0	0	0	25	37	36	2
GEM DANDY	(6)	105,331	0	0	7	23	31	33	6
PREMIER	(4)	104,983	0	2	0	46	11	34	7
SUMMER SWEET 5544	(1)	104,809	0	6	17	35	15	19	8
SUMMER SWEET 5244	(1)	98,280	0	6	27	11	22	23	11
SUMMER SWEET 35214	(1)	97,932	0	0	0	0	46	54	0
GENESIS	(5)	94,885	0	0	0	39	30	27	4
3F 1004	(3)	92,796	0	0	0	30	37	27	6
REVELATION	(5)	91,751	0	0	3	8	77	11	1
TRI X 313	(2)	90,619	0	0	4	51	22	21	2
ASM F469	(2)	88,791	0	0	6	41	0	37	16
TRI X SUNRISE	(2)	83,568	0	0	11	12	46	17	14
3 F 855	(3)	82,872	0	0	0	8	53	6	0
FAVORITE BALL	(3)	81,653	0	0	333	12	39	46	0
SUMMER SWEET 2532	(1)	64,766	0	0	25	8	32	34	1
3F 1273	(3)	60,935	0	0	0	36	49	15	0
3F 1174	(3)	60,761	0	0	0	0	43	57	0
LSD (P=0.05)		33,962	----	----	----	----	----	----	----

SEED SOURCES:

- 1 - Abbott & Cobb
- 2 - American Sunmelon
- 3 - CDM Fasttrack
- 4 - Colorado Seeds
- 5 - Shamrock
- 6 - Willhite

NOTE:

- major causes for culls: blossom end rot and bottle necking

CULTURE:

- Transplant established - April 11, 1996
- Randomized Complete Block Design having 3 replicates / entry
- 5 plant / rep / entry
- 80" raised beds with 2.5' in-row spacing
- Grown on black plastic with drip irrigation
- Once-over harvested - June 27, 1996
- All other cultural practices as employed by cooperator (Willoughby Farms, Batesville, Texas) - plots established in commercial production field

TABLE 2. 1996 STATEWIDE TRIPLOID (SEEDLESS) WATERMELON TRIALS, BATESVILLE, TEXAS

ENTRY	FRUIT CHARACTERISTICS / COMMENTS
TRI X SHADOW	Small round fruit with Baron type rind color and pattern (dark green non-striped)
GEM DANDY	Medium to large round fruit, Tri X 313 rind pattern (light green with slightly darker green medium wide stripe)
PREMIER	Tri X 313 rind pattern, large round fruit, tetraploid fruit evident
SUMMER SWEET 5544	Tri X 313 rind pattern, medium size round to oblong blocky fruit
SUMMER SWEET 5244	Tri X 313 rind pattern, large round to oblong fruit
SUMMER SWEET 35214	Appear to have a split set, some large fruit, but majority small ice-box size, Jubilee rind pattern, round fruit shape
GENESIS	Medium to small round fruit, rind pattern light green with narrow darker green stripes
3F 1004	Tri X 313 rind pattern, medium to small round fruit
REVELATION	Small to medium size fruit, light green with narrow darker green stripes
TRI X 313	Round light green with slightly darker green stripes
ASM 469	Tri X 313 type
TRI X SUNRISE	Medium large round fruit with a Jubilee type rind pattern
3F 855	Medium size round fruit with a Jubilee type rind pattern
FAVORITE BALL	Small to medium size fruit with Jubilee type rind pattern
SUMMER SWEET 2532	Medium large round fruit with Jubilee type rind pattern
3F 1273	Small round dark green with darker green stripe, some tetraploid fruit evident
3F 1174	Very small Black Diamond type



Insectary Plants

This article by Rachael Long, Farm Advisor, Yolo County Cooperative Extension appeared in Small Farm News, published by the University of California. Sept/Oct 1995

Planting borders or strips of flowering plants, termed 'insectary plantings', along the edges of fields, will likely increase the activity of natural enemies in our crops.

How is this possible? Beneficial insects, such as lacewings and parasitic wasps, require supplements of nectar and pollen to enhance their longevity and fecundity. By providing floral resources for these beneficials, we may increase their abundance and obtain better biocontrol of crop pests.

How far will beneficial insects move from these 'insectary plants'? In studies that Andrew Corbett (UC-Davis) and I conducted last spring, we demonstrated that some natural enemies use floral resources provided by borders of flowering plants, and that they will move into adjacent crops and into fields up to a mile away. This work was undertaken by marking floral resources with a rare salt called rubidium (and thereby the beneficial insects that feed on these resources), and monitoring where and how far the natural enemies traveled.

What 'insectary plants' should be selected, and how many should be planted? Designing a beneficial-insect planting entails providing natural enemies with year-round supplemental sources of food (pollen and nectar). Various combinations of plants attract beneficials by providing flowers throughout the year. Natives and nonnatives that thrive in noncrop areas, such as field margins, hedgerows, and roadsides are best suited. While many species are drought tolerant, supplemental watering can greatly enhance and extend flowering periods. The greatest impact of 'insectary plantings' is likely to be obtained through large plantings throughout a farm and region, rather than by plantings along single edges of isolated fields.

Herbicide Application Timing Precautions for Transplanted Watermelons

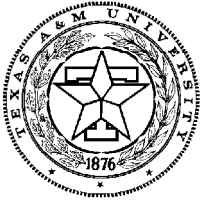


The use of transplants for watermelon production is widespread in Florida. A majority of transplant acreage is on mulched culture, but a growing acreage of non-mulched production now uses watermelon transplants, as opposed to direct seeding. There have been a number of reports of damage to watermelons with the use of ethalfluralin (Curbit), especially in Georgia. Work in Florida has shown that use under normal weather conditions, and following label directions, is safe. The label, however, is for seeded watermelon. Wayne Mitchum and David Monks from North Carolina State University reported that Curbit applications to transplanted watermelon resulted in significant growth and yield reductions if watermelon transplants were planted through surface-applied Curbit.

Scientists from the University of Georgia (Tifton), and the University of Florida put out trials this past year to confirm these findings in Georgia and Florida. The Florida trials were put out at the Suwannee Valley Research and Education Center, Live Oak. The trials consisted of Curbit, Command, PCC-170 (a premix of Curbit and Command), and Prefar plus Alanap, applied preplant incorporated (PPI), pretransplant (PRE) to the soil surface, and posttransplant (POST) over the top of newly transplanted seedlings. Growth of vines during the season was severely reduced in the Curbit and the Curbit premix pretransplant (PRE) treatments. Where Curbit was incorporated and in the POST application over the top of the transplants, no reduction in vigor or growth was seen. At harvest, fruit number, weight per melon, and total yield were severely reduced in the pretransplant (PRE) applied treatments. Early bleaching of leaves was noted in all the treatments where Command was applied. This did not, however, reduce vigor nor final yield. Application of Command PPI gave the greatest yields among the three application methods. Yield from pretransplant (PRE) applications were significantly lower than the PPI treatments, but no lower than the POST treatment. There were no differences among the three application methods where Prefar plus Alanap was used. Again, the highest yields were from the PPI treatments, but they were not significantly different from the other application methods.

Similar results have also been reported from Georgia. The results from the three application methods of Curbit are not what one would expect. The results, however, were dramatic, and indicate that growers should not apply Curbit to transplanted watermelons except to row middles, as the label states. Pretransplant applications are not labeled. Preemergent applications to seeded melons in trials this year again were safe. If pretransplant applications of herbicides are needed in a non-mulched production system, Prefar plus Alanap is labeled and safe for use.

- W. M. Stall in Vegetarian, December 10, 1996, an Extension publication of the Horticultural Science Department, The University of Florida



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- ***Insectary Plants***
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A handwritten signature in black ink that reads "Frank J. Dainello".

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