

# Seedless Watermelon Variety Study

West Florida Research and Education Center – Jay, FL



## Authors:

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Single row plots containing 10 watermelon plants were established on April 6<sup>th</sup>, 2015 at the West Florida Research and Education Center (WFREC) in Jay, FL. Experimental plots were arranged in a randomized complete block design with four replications. Watermelon seedlings were transplanted into raised beds covered with 1 mm thick black polyethylene mulch. Row spacing was 8 feet and plants were spaced 3 feet in the row. 30-0-20 lb/acre N- P<sub>2</sub>O<sub>5</sub>-K<sub>2</sub>O was applied preplant. Petiole sap testing was done at various times throughout the trial to determine nutrient needs, fertigation was adjusted accordingly. Total fertilizer application for the season was 50-0-40 lb/acre N- P<sub>2</sub>O<sub>5</sub>-K<sub>2</sub>O. Weekly fungicide treatments began a week after planting and continued through the duration of the trial. The fungicide treatment schedule used is a [University of Florida recommended fungicide rotation](#) focused on Gummy Stem Blight (GSB), *Didymella bryoniae*.

The trial was heavily impacted by the presence of GBL and weed competition. Although a preemergence herbicide was applied at planting, environmental conditions, lack of sufficient water for activating, and excess water thereafter caused poor efficacy.

First harvest was on June 10, 2015 with a second on July 7, 2015. Weights were taken on all watermelons that were harvested. Additionally a quality sample set of three melons were taken from each plot to rate the varieties on hollow heart, hard seed, and sugar content (brix).

Experimental data were analyzed using the GLM procedure in SAS and means separation was performed with Duncan's multiple range test at the 5% level, when appropriate.

Yields from the trial were not acceptable for the production system used and were well below what is to be expected. This is due to the heavy presence of Gummy Stem Blight that affected the trial. Weeds were not controlled adequately by the preemergence herbicide and later in the trial affected the fungicide application by not allowing for good coverage. It is imperative for growers to apply protective fungicides with proper amounts of water and pressure in order to get good coverage and canopy penetration.

The goal of the trial was to showcase Florida Department of Agriculture and Consumer Services (FDACS) Best Management Practices for local growers. Petiole sap testing, backflow protection, plasticulture, and soil testing were all emphasized at a field day on May 30, 2015.

Special thanks to Dr. Josh Freeman of the NFREC in Quincy for supplying transplants and completing the statistical tests.

**Table 1.**

**Seedless Watermelon Variety Trial - Spring 2015 - WFREC Jay, FL**

Variety	Hollow Heart <sup>Y</sup>	Hard Seed <sup>X</sup>	°Brix	Avg Weight (lb)	Yiel (lbs/acre) <sup>Z</sup>	
					1st Harvest	Total
Captivation	0 b	0.225 cd	10.475	14.3	37852 a	59378 a
Nun 01009	0.4 b	0.12 cd	10.06	15.4	20174 bdc	56797 ba
Maxima	0.05 b	0.05 d	10.2333	14.475	21254 bdc	53234 bac
Tri x 313	0 b	0.075 cd	10.425	14.625	29975 ba	52708 bac
Troubadour	0.15 b	1.25 ab	10.575	13.5	27683 bac	52612 bac
7167	0.0857 b	0.2714 cd	10.1143	13.875	27520 bac	46015 bc
6177	0.26 b	0.74 bd	9.24	13.5	23147 bdac	45720 bc
Traveler	0.05 b	0.2 cd	9.8667	13.475	8367 d	42653 c
Melody	0.14 b	0 d	10.52	12.45	11870 dc	42625 c
Fascination	1.35 a	1.4000 a	10.6	13.925	18740 dc	40393 c

Means are to be compared within columns, means not followed by the same letter are significantly different at P<0.05, ns = not significant

<sup>Z</sup>Yields are based on a plant population of 1815 plants per acre

<sup>Y</sup>Hollow heart is a visual rating of severity on a 0-5 scale with 3-5 being unmarketable

<sup>X</sup>Hard seed were counted on four faces of cut fruit – Data represents average hard seed count per fruit