

Fall 2019 – Sweet Potato Variety Trial

Conducted by:

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Experimental design and crop management:

Location: Tifton, GA

Varieties evaluated: 6

Treatment	Variety
1	NC11-0234 G2 160
2	NC09-122 160
3	13-81
4	ORX
5	Couving 160
6	Beaugard

Planting Date: June 24, 2019.

Plant spacing: 3' row spacing with 8" in-row spacing (21,780 per acre population).

Plot size: 30 plants per plot with 4 replication per variety arranged as a randomized complete block design.

Fertility: 1000 lbs/ac. of 10-10-10 fertilizer at planting, followed by two sidedress application of 150 lb/ac of 15.5-0-0 fertilizer at emergence and 30 days after emergence.

Herbicide and pest management followed UGA Extension recommendations.

Data Collection:

Harvest: October 10, 2019.

Grading: Sweet potato was graded into #2 (< 1 ½ in), #1 Petite (1 ½ - 2 ¼ in), #1 (2 ¼ - 3 ¼ in), and Extra #1 (> 3 ¼ in). Sweet potatoes bigger than size Extra #1 were considered unmarketable.

Data analysis: Statistical analysis were conducted using the software R Studio.

Results:

Table 1 shows the results of the 2019 sweet potato variety trial. Beaugard had the highest total yield with 50,722 lbs./ac, while the lowest yield was measured for 13-81 (17,844 lbs./ac). There were no significant differences among cultivars for unmarketable yield and yield of #2. Cultivar ORX had the highest yield of #1 Petite (12,812 lbs./ac), but it was only significant difference from cultivar NC09-122 160 (3,926 lbs./ac). Moreover, cultivar ORX (17,941 lbs./ac) and Beaugard (18,858 lbs./ac) had the highest yield of #1, but it was only significant difference from cultivar 13-81. The highest yield of #1 Extra was measured for cultivar Beaugard (15,758 lbs./ac), followed by NC09-122 160 (8,325 lbs./ac).

Table 1. Yield and quality of sweet potato cultivars.

Cultivar	T. Yield	Unmark.	#2	#1 Petite	#1	#1 Extra
lbs./ac						
NC11-0234 G2 160	31,443 b	5,485 a	3,937 a	7,699 ab	12,333 ab	1,987 b
NC09-122 160	31,683 b	5,996 a	0.0 a	3,926 b	13,435 ab	8,325 ab
13-81	17,844 c	4,002 a	0.0 a	9,484 ab	4,357 b	0.0 b
ORX	40,790 ab	7,041 a	499 a	12,812 a	17,941 a	2,495 b
Couving 160	30,953 bc	5,347 a	591 a	7,328 ab	13,018 ab	4,668 b
Beaugard	50,722 a	5,407 a	0.0 a	10,699 ab	18,858 a	15,758 a