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Performance of Five Slicing Cucumbers in Southwest Michigan

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Objectives

To evaluate performance of five slicing cucumber selections for adaptability to Southwest Michigan growing conditions.

Summary

All five selections evaluated had statistically similar total yields. Four entries (Brickyard, VC18013163, VC18013225, and Raceway) had similar Number 1 Fruit Yield and appear suitable for planting in Southwest Michigan. VC18013225 and Raceway had the longest fruit while fruit diameter was similar for all entries.

Methods

Planting

Each entry was direct seeded, two seed/hill on 6 June 2021 into a plastic mulched, raised bed containing a single drip irrigation tape. Spacing was 5.5 feet between rows and 18 inches in the row for a plant count of 10,560 plants per acre. There were 16 plants per plot with four replications per entry. The trial was planted and analyzed as a completely randomized design.

Fertilizer

Prior to bed shaping, 33-0-0, 0-0-64, sulfur and Solubor were broadcast and incorporated at 100, 125, 27 and 10 pounds per acre, respectively. After planting, liquid 28-0-0 was applied through the drip system once a week at 1-pound nitrogen/acre/day. Drip fertilization began 7 June and ended 9 August for a post-plant total of 70 pounds/acre nitrogen.

Weed control

Weeds were controlled through mechanical cultivation and hoeing

Plant care

Plants were irrigated as needed and pests controlled using recommended commercial practices.

Harvest and data collection

Plots were harvested 13 times between 21 July and 18 August and graded into number 1, number 2, and cull fruit. Cull fruit were fruit showing poor pollination and/or extreme

curvature and unattractive fruit skin blemishes. Number 2 fruit had slight curves and surface blemishes. Fruit length and diameter were taken on number 1 fruit on either the fourth or the fifth harvest

Results

Total yield in the 2021 trial ranged from 904 to 688, 1-1/9 bushel boxes/acre. However, no statistical difference was found for total yield, yield number 2, and yield of cull fruit (Table 1). A statistical difference was noted in yield of number one fruit with VC18013208 having lower number one yield than the other four entries. VC18013225 and Raceway were similar in fruit length at 9.41 and 8.88 inches, respectively. This length was detectable even without measurement, especially during the early harvests. All entries were similar in fruit diameter.

Pictures of number one fruit from each selection were taken at the eighth harvest and are shown in Figures 1, 2, and 3.

Table 1. Yield in 1-1/9 bushel cartons/acre and fruit length and diameter of five cucumber selections in 2021 at the Southwest Michigan Research and Extension Center, Benton Harbor, Michigan. Spacing was 5.5' between rows and 1.5' in the row with two plants/hill, 10,560 plants/acre.

Entry	Seed ¹ Source	Total Yield	Yield No. 1	Yield No.2	Yield Cull	Length (inches)	Diameter (inches)
Brickyard	SE	904	530²	228	146	8.63	1.99
VC18013163	SE	892	454	235	203	8.83	1.96
VC18013225	USA	830	493	197	140	9.41	2.00
Raceway	SE	787	492	167	128	8.88	1.94
VC18013208	SE	688	376	159	153	8.73	1.95
	lsd _{0.05}	NS	139	NS	NS	0.57	NS

¹SE: Seminis Seeds, USA: US Agriseeds

²Letters in bold in the same column are not statistically different from the highest number in that column.



Figure 1. Five Slicing cucumber selections grown in 2021 at the Southwest Michigan Research and Extension Center, Benton Harbor, Michigan. Front row, left to right: Raceway, Brickyard, VC18013225. Back row left to right: VC18013163, VC18013208.



Figure 2. Three Slicing cucumber selections grown in 2021 at the Southwest Michigan Research and Extension Center, Benton Harbor, Michigan. Left to right: Brickyard, VC18013163, VC18013225.



Figure 3. Two Slicing cucumber selections grown in 2021 at the Southwest Michigan Research and Extension Center, Benton Harbor, Michigan. Left to right: Raceway, VC18013208.