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SAM: Sustainable Anthracnose Management for Watermelon and Cucumber Growers in the Eastern U.S.

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Cucumber Variety Trial



Foliar disease symptoms in the 2024 cucumber variety trial.

Materials and Methods

Field Layout

Location	Hort Hill, UGA Tifton Campus
Experimental design	Randomized complete block design (RCBD)
Row to row distance	6 ft
Plant to plant distance	1 ft
Number of varieties	8
Number of beds/plot	2
Number of plants/plot	20 (2 beds/plot)

Materials and Methods: Varieties

S.N.	Variety	Disease resistance
1	Bristol	HR: Co:1
2	Diamondback	IR: Co
3	Mamba	IR: Co
4	Raceway	IR: Co:1
5	Python	IR: Co
6	Brickyard	IR: Co:1
Check varieties		
7	Marketer	Susceptible
8	H-19	Resistant

Results: Yield

Variety	Total Yield (lbs/A)	Marketable yield (lbs/A)	Unmarketable yield (lbs/A)	Percent marketable (%)	Average weight (lbs)
Brickyard	25332.0 c	20373.4 c	4958.6 cd	80.2 ab	0.5 a
Bristol	39768.5 ab	34178.3 ab	5590.2 bcd	85.2 ab	0.6 a
Diamond back	33053.0 bc	25871.0 bc	7182abc	77.8 b	0.5 a
H-19	24564.2 c	22103.1 c	2461.1d	90.0 a	0.3 b
Mamba	41752.3 ab	33131.0 ab	8621.3ab	79.5 ab	0.6 a
Marketer	34764.5 bc	27366.6 abc	7397.9abc	78.8 b	0.5 a
Python	46177.2 a	37232.9 a	8944.3a	80.7 ab	0.6 a
Raceway	26823.9 c	20591.2 c	6232.7abc	76.5 b	0.6 a
P value	<.0001*	<.0001*	<.0001*	0.0072*	<.0001*

Results: AUDPC

Variety	AUDPC
Brickyard	159 a
Bristol	186 a
Diamond back	271 a
H-19	168 a
Mamba	219 a
Marketer	333 a
Python	254 a
Raceway	236 a
P value	0.3871

Python



Bristol



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H-19



Raceway



Diamondback



Marketer



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Mamba



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Conclusions

Disease Severity: There were no significant differences in anthracnose disease severity among the cucumber cultivars, as indicated by similar AUDPC values across all varieties.

Yield Performance: 'Python' had the highest total and marketable yields, while 'H-19' achieved the highest percentage of marketable produce. In contrast, 'Diamondback', 'Brickyard', 'Raceway', and 'H-19' had the lowest total yields.

Fruit Quality: 'Python' also had the highest unmarketable yield, indicating a significant portion of its total yield was not suitable for the market. 'H-19' had the lowest average fruit weight, while most other varieties had a higher average weight of 0.6 lbs.

THANK YOU

Acknowledgments

- SCRI
- South Georgia Vegetables Lab

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