CULTIVAR EVALUATION FOR WATERMELON IN THE U.S. VIRGIN ISLANDS

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ABSTRACT: An on-farm cultivar evaluation trial for watermelon (Citrullus lanatus) was conducted to compare differences in crop development, marketable yield, and tolerance to pests and diseases. Two large size cultivars (‘Crimson Sweet’ and ‘Desert King’), and three ice box cultivars (‘Jade Star’, ‘Sugar Baby’, and ‘Yellow Doll’) were direct seeded on 23 August 2002 into rows 1.22 m apart and spaced 0.91 m within rows. The trial was established in a randomized complete block design with three replications. Cultivars were harvested on six dates from 30 October to 25 November 2002. Data collected at each harvest included total number of fruits, fresh weight, number of marketable fruits and percentage soluble solids (brix). All cultivars had excellent germination ranging from 90 to 100%. Vine length to first flower ranged from 102 cm for ‘Yellow Doll’ to 213 cm for ‘Crimson Sweet’. All plots were infected with powdery mildew; no cultivar showed tolerance. Statistical analysis showed significant differences (P<0.05) in total number and marketable fruits per plant, but not in fruit weight. Cultivars with greatest number of marketable fruits were ‘Yellow Doll’ (27.6) and ‘Sugar Baby’ (27.3). ‘Desert King’ produced the lowest number of fruits (5.6). Cultivars with highest average fruit weight were ‘Crimson Sweet’ (4.6 kg) and ‘Desert King’ (4.2 kg). ‘Yellow Doll’ produced the smallest average fruit size (1.4 kg). Among cultivars, differences in percentage soluble solids (brix) were significant (P<0.05). Generally, ice box cultivars were sweeter than the larger size cultivars. Brix reading was highest for ‘Jade Star’ (11.12) followed by ‘Yellow Doll’ (10.48). In terms of marketable number of fruits, it appears that ice box cultivars of watermelon are more productive than larger size cultivars. On the basis of this study, cultivars ‘Yellow Doll’ and ‘Sugar Baby’ should be grown in the Virgin Islands.