

Research Paper

Evaluation of Pineapple Hybrids for Quantitative and Qualitative Characters and Inheritance of Leaf Spine Distribution

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Abstract

Mauritius (Queen type) and Kew (Cayenne type) are the economically important two pineapple cultivars in Sri Lanka. The desirable characters for both fresh market and canning are detached between two cultivars. The aim of the pineapple breeding programme at Fruit Research and Development Institute Horana Sri Lanka was to develop pineapple hybrids with improved yield and quality by crossing Kew and Mauritius. 435 hybrids derived from the cross between Kew and Mauritius and its reciprocal were evaluated for fruit weight, fruit shape, crown weight, eye shape, Brix% and spine distribution of leaf margin. Six promising hybrids having combined characters of ≥ 1700 g fruit weight, cylindrical shape, ≤ 350 g crown weight, ≥ 17 Brix%, spiny at the leaf tip and broad eyes were selected for further evaluation. Spiny tip leaf margin showed by the parent Kew is controlled by the "ppSs" genotype while the spiny leaf margin of the parent Mauritius is controlled by the "ppss" genotype. The phenotypic segregation of the hybrid progeny was 1:1 (spiny tip: spiny) corroborates the theory of two genes with epistatic interaction of the locus "P" (piping) over the locus "S" (spiny) in control of leaf margin spine distribution.

Keywords: Hybrids, Kew, Mauritius, Spine distribution