

IMPROVEMENT OF BANANA CV. RASTHALI (*MUSA* SPP., AAB) THROUGH CLONAL SELECTION

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ABSTRACT

Rasthali (AAB), also known by the name “Poovan” is a popular and highly prized table variety of banana in Kerala, South India owing to its unique flavour and quality. The vast difference in agroclimatic conditions under which the variety is grown generate many clones exhibiting variation in both vegetative and reproductive characters. Banana is a recalcitrant crop for conventional breeding owing to its inherent problems like triploidy, sterility and parthenocarpic nature. However, clonal selection offers ample scope for the genetic improvement of agronomically elite clones and still remains a viable approach. In these circumstances, the present study was undertaken under the ICAR - All India Coordinated Research Project on Fruits at the Banana Research Station, Kannara, Kerala Agricultural University, Thrissur, Kerala, India with the objective to collect and evaluate Rasthali clones available in the state. Eight clones of Rasthali which were collected and conserved in the germplasm was evaluated for different quantitative and qualitative characters. Among the clones, 2017/1KA recorded the maximum bunch weight (9.90 kg per plant), and was on par with 2017/8KA, 2017/2KA and 2017/5KA. While hands per bunch (8.44) and fingers per bunch (133.61) were maximum for the clone 2017/1KA, finger weight, finger girth and finger length were higher in 2017/8KA and 2017/2KA. 2017/8KA recorded the minimum plant height (230.00 cm) which was one metre shorter than the tallest clone, 2017/1KA. Days to bunching (242.83 days) and crop duration (340.25 days) was also least in 2017/8KA. The same clone also performed better with respect to quality characters in terms of TSS (27.50 °B), total sugar (23.65%) and minimum fruit acidity (0.13%). The present study identifies 2017/8KA as a superior clone which could be popularised for cultivation under the agroclimatic conditions of Kerala.

Keywords: Banana, Musa, Rasthali, clone, germplasm