

THE PERFORMANCE OF CLONAL PROGENIES FROM DIFFERENT YIELD GROUPS IN BANANA cv. PALAYANKODAN

Banana is grown in India under varying soil and climatic conditions, exploiting the wide varietal variability that exists in the crop. In Kerala, Palayankodan (AAB group) is the prominent cultivar, which is found to be tolerant to poor soil and drought conditions (Simmonds, 1966). Even under uniform cultural and manurial practices, variation in bunch weight is often noticed between plants within this cultivar. Normally, the variation in yield in banana could be attributed to the suckers used and the environmental factors. However, in a cultivar like Palayankodan which has been under cultivation for hundreds of years, possible **intraclonal** variation due to somatic mutation cannot be ruled out.

A field experiment was conducted in the College of Horticulture, Vellanikara, Thrissur during the year 1981-82 to find out whether suckers selected from plants belonging to different yield groups would inherit the yield expression to their progenies through suckers in order to arrive at indications on the possibility of clonal selection. The investigations were done in rainfed banana using the cultivar Palayankodan. The mother plants which were grown

under uniform cultural and manurial practices were grouped into four classes, based on their bunch weight. The classes were B₁ (5-7 kg/bunch), B₂ (8-10 kg/bunch), B₃ (11-13 kg/bunch) and B₄ (14-16 kg/bunch). Thirty mother plants and sixty suckers from these were selected for each group. Then these suckers were again grouped into three according to the weight of suckers. But only the first aspect is considered for discussion in this research note. The trial was laid out as a factorial experiment in randomised block design with twelve treatments and five replications. In each plot there were four plants.

From the study it was found that the yield of mother plant could not influence the yield and yield components in the progenies (Table 1). The sucker selection based on the bunch weight of the previous crop may not serve any useful purpose in a plant like banana, and especially in the cultivar Palayankodan. This would mean that **whatever** variation in bunch weight within this clone, that was noticed, may probably be **contributed** by environmental and other factors. The observation of Simmonds (1966) that despite the

Table 1. Effect of suckers from different yield groups on bunch characters

Bunch wt. of mother plant kg/bunch	Wt.of bunch kg	Length of bunch cm	No.of hands	Wt.of hands kg	No. of fingers	Wt.of fingers g
5-7	11.6	52.1	11.6	1.2	179.4	62.9
8-10	11.1	51.2	11.9	1.1	183.1	62.2
11-13	11.9	51.5	11.6	1.2	175.1	65.9
14-16	11.2	51.8	11.7	1.1	180.4	62.8
CD (0.05)	NS	NS	NS	NS	NS	NS

enormous scale of cultivation of Mysore in India only one mutant has been recorded is noteworthy. The factors that would have influenced the bunch weight of mother plants might be variable soil fertility, sucker size or other factors within a population (Azzouz *et al.*, 1972).

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