

PERFORMANCE EVALUATION OF NEW TOBACCO VARIETIES

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By

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ABSTRACT

At present, the variety of K 326 is the only commercially cultivated Tobacco (*Nicotiana tabacum*) variety for cigarette production in Sri Lanka. As one variety has currently been cultivated, there is a need to broaden the genetic diversity under different field conditions. Therefore, this study was initiated to check the adaptability of five new tobacco cultivars and the parameters of growth, disease incidence and yield were compared with the currently cultivated variety of K 326 under the agro climatic conditions of low country intermediate zone in Sri Lanka. Introduced tobacco genotypes of K 326, LK 26 R, LK 01, LK 43/34, OD 86 and K 326 TMV were grown under field conditions in a Strip plot design with 7 replicates. Survival rate of the seedlings, growth characters, time taken to reach to the harvesting stage, fresh leaf yield and total disease incidence were evaluated to screen the high performing varieties. The seedling vigor of the variety of LK 26 R was significantly lower than the other varieties. All the varieties reached the harvesting stage at same time and there were no differences among varieties in relation to growth parameters at topping except leaf area. The variety of LK 26 R had the highest leaf area at this stage. Highest fresh leaf yield was recorded in LK 43/34 comparative to the Standard variety of K 326. The lowest leaf yield was observed in LK 26 R. Out of these results, it was clearly evident that the variety LK 43/34 was the best performing variety in terms of green leaf yield in contrast with the Standard variety; disease incidence and time taken to reach harvesting stage were also in the average levels.