

## IMPACT OF POTASSIUM FERTILIZER RECOMMENDATIONS ON TOBACCO YIELD AND COST BENEFIT ANALYSIS OF EACH RECOMMENDATION

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Potassium fertilizer is one of the major determinants of good quality leaves and vigorous growth of tobacco plant. This study was conducted at Kandaketiya area of Mahiyangana district of Sri Lanka to evaluate the effect of enhanced potassium and its time of application on different growth stages of field established flue-cured, k-326 tobacco variety. For this purpose, Potassium Sulphate (K<sub>2</sub>SO<sub>4</sub>) was used as the source of Potassium.

There were four Potassium treatments tested during this study named as T1, T2, T3, T4. T4 is the generally used Potassium recommendation which is applied by Ceylon Tobacco Company (CTC). T1 is the application of additional 3g Potassium per plant at 55 days after planting and T2 is the application of an additional uniform rate of 1.5 g Potassium twice a plant at 30 days after planting and 55 days after planting. T3 is an additional application of 3g of Potassium per plant at 30 days after planting.

Results of the aforementioned treatments revealed that the application of 3g of Potassium at 55 days after planting produced optimum quality leaves with good weight of flue-cured tobacco. Thus, 3g of Potassium per plant at 55 days after planting proved that it is the best combination in flue-cured tobacco cultivation.

Financial cost benefit analysis was carried out for each treatment to investigate the most profitable treatment out of the all four treatments. Application of 3g of Potassium at 55

days after planting gave the highest Benefit Cost Ratio and Net Present Value for farming enterprises. Based on overall results, it was concluded that 3g of Potassium per plant at 55 days after planting is the most appropriate in operation for Flue-Cured tobacco cultivation both in terms of biological as well as economical benefits.

*Key words:* Tobacco industry, Financial cost benefit analysis, Potassium application