

ABSTRACT

Coffee stands as a plantation commodity of high economic value, making the determination of accurate N, P, and K fertilizer recommendations in Pegasing District crucial, as the area is recognized as a center for high-quality Arabica coffee production. Nitrogen, phosphorus, and potassium are vital for the growth and productivity of coffee plants across various age groups, a factor assessed through the analysis of both soil and leaf tissue samples. The soil and plant samples were taken at 3 different points for each coffee plant age group 0–3 years, 3–6 years, and 6–9 years. Soil analysis indicated that Total N and Available P ranged from medium to high, while Exchangeable K spanned from low to high. Conversely, tissue analysis revealed that Nitrogen and Potassium levels were generally deficient to low, although Phosphorus levels were excessive. This nutritional disparity resulted in varied fertilizer prescriptions, the highest Urea recommendation (182.05 kg/ha) was for 3–6 year old plants in Berawang Baro, contrasting with the lowest (64.5 kg/ha) for 0–3 year old plants in Arul Badak, the highest SP-36 (154.36 kg/ha) was prescribed for 0–3 year old plants in Tebuk, while the lowest (82.02 kg/ha) was also for the 0–3 age group in Arul Badak; and finally, the highest KCl (99.94 kg/ha) was needed for 6–9 year old plants in Paya Jeget, with the lowest (64.85 kg/ha) for 0–3 year old plants in Arul Badak.

Keywords: N-total, P-available, K- available, Coffe Plant