ABSTRACK

Central Aceh Regency possesses significant potential for shallot cultivation due to favorable highland agroclimatic conditions. However, shallot productivity in several areas remains suboptimal due to low soil nutrient availability and soil type variability. This study aims to determine the nutrient status of nitrogen, phosphorus, and potassium in shallot cultivation areas. Soil samples were collected from 10 shallot farming sites representing five soil types: Grumosol, Andosol, Podsolic, Brown Podsolic, and Red-Yellow Podsolic. The parameters analyzed included total N, available P, and exchangeable K. The results showed that the total N content of the soil in shallot fields in Central Aceh Regency was classified as moderate to very high, namely 0.22-0.81%. The available P content was classified as very low to very high, namely 3.07-19.58 ppm, while the exchangeable K ranged from low to high, namely 0.10-0.60 me/100 g In Grumosol soil, Urea fertilizer is required 56.4-69.35 kg/ha, SP-36 207.84-220.95 kg/ha, and KCl 36.4-83.4 kg/ha. In Andosol, Urea is required 12.9-56.4 kg/ha and SP-36 117.9-197.81 kg/ha. In Podsolic, 43.3-47.6 kg/ha of Urea is required, in Red Yellow Podsolic, 12.9 kg/ha of Urea is required and SP-36 200.59 kg/ha, while in Brown Podsolic, 18.5-196.3 kg/ha of SP-36 is required.

Keywords: Available P, exchangeable K, total N.