

ABSTRACT

Shallots (*Allium ascalonicum* L.) are an important horticultural commodity widely used as a culinary ingredient. The annual increase in demand for shallots is not matched by adequate production, primarily due to improper fertilization and low soil fertility. Therefore, improving soil fertility through appropriate fertilization is crucial. This study aimed to investigate the effects of cow manure and NPK on shallot growth and yield. This research was conducted at the experimental garden and Agroecotechnology Laboratory of the Faculty of Agriculture, Malikussaleh University, North Aceh Regency. The research was conducted from October to December 2025. The design used was a two-factorial Randomized Block Design (RBD) with three replications. The first factor was cow manure consisting of three levels: S0 (0 kg/plot), S1 (1.5 kg/plot), S2 (3 kg/plot). The second factor was NPK fertilizer consisting of three levels: N0 (0 g/plot), N1 (20 g/plot), and N2 (40 g/plot). The results showed that the treatment of cow manure doses had no effect on the growth and yield of shallots in all observed variables. NPK fertilizer alone had an effect on the variables of plant height at 21-49 HST, number of leaves at 21-49 HST, wet tuber weight per plot, air-dry weight per plot, and reduced tuber weight per hill. The best treatment was obtained with the application of NPK 40 g/plot (N2). There was no interaction between the combination of cow manure and NPK treatments on the growth and yield of shallots.

Keywords: cow manure, NPK fertilizer, fertilizer dosage, shallots