

ABSTRACT

Watermelon (*Citrullus vulgaris* Schard.) is a horticultural commodity that has quite high economic value, and its fruit is very popular with Indonesian people. The decrease in watermelon productivity is caused by low levels of nutrients in the soil. One of the efforts made to increase watermelon production is by fertilizing. The aim of this research was to determine the growth and yield of watermelon plants when given doses of Nitrogen fertilizer and liquid coconut fiber organic fertilizer. This research was conducted in Pinto Makmur, Muara Batu, North Aceh and in the laboratory of the Faculty of Agriculture, Malikussaleh University. This research was conducted from Mei 2024 to August 2024. This research used a Factorial Randomized Block Design (RBD) with three replications. The first factor is nitrogen fertilizer consisting of (N0) 0 g/plot, (N1) 195 g/plot, and (N2) 273 g/plot. The second factor is coconut fiber liquid organic fertilizer consisting of (S0) 0 ml/l, (S1) 200 ml/l, and (S2) 400 ml/l. The results of the research show that the application of nitrogen fertilizer has a significant effect on plant length of 17,00 cm, stem diameter 14-28 dap of 4,00 mm and 6,21 mm, leaf chlorophyll of 34,83 CCI, flowering age of 17,00 dap, harvest age 54,55 dap, fruit length 22,64 cm, fruit circumference of 47,47 cm, fruit weight per plant of 21,878 kg, and fruit weight per plot of 43,58 kg. Providing coconut fiber liquid organic fertilizer had a significant effect on plant length of 240,90 cm, stem diameter 28 dap of 6,11 cm, and total dissolved solids of 8,00 brix⁰. There was no interaction between the application of nitrogen fertilizer and coconut fiber liquid organic fertilizer on the growth and yield of watermelon plants.

Keywords: Liquid Organic Fertilizer, Nitrogen, Watermelon