ABSTRACT

Okra (*Abelmoschus esculentus* L. Moench) is a vegetable crop with high economic value and nutritional content. However, its productivity in Indonesia remains relatively low. One effort to increase okra production is through proper plant spacing and appropriate nitrogen fertilization. This study aimed to evaluate the effects of plant spacing and doses of nitrogen fertilizer on the growth and yield of okra. The research was conducted at the Glee Madat Hamlet Paloh Lada Village Dewantara Subdistrict, from July to September 2025. The experiment was arranged in a factorial randomized block design with two factors. The first factor was plant spacing, consisting of three levels: 50 cm × 35 cm, 50 cm × 55 cm, and 50 cm × 75 cm. The second factor was dose of nitrogen fertilizer, consisting of three levels: 175 kg/ha, 225 kg/ha, and 275 kg/ha. Each treatment was replicated three times. Observed variables included plant height, number of leaves, stem diameter, internode length, leaf chlorophyll content, number of stomata, flowering age, number of fruits per plant, fruit weight per plant, number of fruits per plot, and fruit weight per plot. The results showed that plant spacing and dose of nitrogen fertilizer individually had significant to highly significant effects on most growth and yield parameters of okra. Plant spacing of 50 cm × 75 cm and dose of nitrogen fertilizer 275 kg/ha produced the best growth and yield performance of okra. No significant interaction was observed between plant spacing and nitrogen fertilizer treatments on all observed variables.

Keywords: nitrogen fertilizer, okra, plant spacing