ABSTRACT

Watermelon (*Citrullus lanatus* L.) is a horticultural commodity fruit crop from the cucurbitaceae family which has high economic value so that it is widely favoured by people in Indonesia. The current problem is that farmers cultivate watermelon plants still traditionally, it is feared that it will cause fruit rot, the quality of the fruit is not guaranteed because they still plant directly on the ground without the use of adjuncts, planting patterns like this are done by us inggin changing through planting patterns with the use of adjuncts, in the hope that the quality of the fruit can be guaranteed. This study aims to determine the effect of planting patterns and pruning on the growth and yield of watermelon plants. This research was conducted in the experimental garden of the Faculty of Agriculture, Universitas Malikussaleh, Muara Batu District, North Aceh Regency, Aceh and the Laboratory of the Faculty of Agriculture, Malikussaleh University. This research was conducted from February to April 2024. Materials that will be used for this research are watermelon seeds of F1 Hybrid variety, cow manure, and N,P,K fertiliser. Using a Randomised Group Design (RGD) experiment with two factors and three replications. The first factor is the planting pattern (P) with 2 levels, namely P0 (without using stakes) and P1 (using stakes). The second factor is pruning (R) with 3 levels, namely R0 (control), R1 (pruning internode 15) and R2 (pruning internode 20). Parameters observed were leaf area, leaf chlorophyll, stem diameter, fruit length, fruit circumference, fruit weight per plant and fruit sweetness. The treatment of planting patterns affects the variables of leaf chlorophyll, fruit length and fruit circumference. The best treatment was obtained in the use of the adjuster. Pruning treatment affects the variables of fruit circumference. The best treatment is obtained by pruning internode 20. There is no interaction between the treatment of planting patterns and pruning on the growth and yield of watermelon plants.

Keywords: fruits, internode pruning, staking and quality