

ABSTRACT

The shallots plant is one of the vegetable commodities that are needed by the community and contains high nutrition. Therefore, there is an alternative technology that can be used as an effort to increase the growth and yield of shallot plants, namely with sonic bloom technology. The aimed of this research was to determine the effect of the application time of sound waves (sonic bloom) on the growth and yield of several varieties of shallot plants. This research was conducted in the experimental garden and in the Agroecotechnology laboratory of the Faculty of Agriculture, Malikussaleh University. The implementation of this research carried out in January - March 2024. This study used the Split Plots Design method arranged in a Randomized Group Design. The main plot factor was the treatment of sonic bloom technology consisted of 3 types of treatment, namely: W0 (Without sonic bloom application), W1 (07.00 - 08.00 am), W2 (12.00 - 13.00 pm) W3: (16.00 - 17.00 pm). The subplot factor was the type of plant variety, namely: V1 (Batu Ijo variety), V2 (Tajuk variety), V3 (Bauji variety). The application time of sonic bloom affected the growth and yield of shallot plants on the variables of plant height 20-50 DAP, number of leaves 30-50 DAP, number of tillers, length of upper stomata, length of lower stomata, width of upper stomata, width of lower stomata, number of upper stomata, number of lower stomata, wet weight of bulb units, weight of bulbs per clump, dry weight of bulbs per clump, shrinkage of bulbs, number of bulbs, diameter of bulbs. Then, the variety treatment factor affects the variables of plant height, number of tillers, stomatal length, upper stomatal width, number of stomata, wet weight of tuber units, tuber weight per clump, dry weight of tubers per clump, tuber shrinkage, number of tubers, and tuber diameter. There is an interaction between sonic bloom treatment and varieties on the variables of lower stomatal length, lower stomatal width, number of lower stomata, tuber weight per clump and dry weight of tubers per clump.

Keywords: Batu Ijo, Leaf Stomata, Time Application, Varieties