

ABSTRACT

Gogo rice is a seasonal crop that has the advantages of being resistant to drought, disease, does not require a lot of water for cultivation, has the characteristics of high yield, resistant to main diseases, plant height reaches 1 m, dense and long panicles, mature or medium life (80-120 days), tolerant to low pH, high Al, and good rice quality it is expected that the application of Photosynthetic bacteria (PSB) and NPK to the growth and yield of gogo rice (*Oryza sativa* L.). This research was carried out in the Experimental Garden of the Faculty of Agriculture and the Laboratory of the Faculty of Agriculture, Universitas Malikussaleh. This research was carried out from February 2025 to June 2025. This study was conducted using the Group Random Design (GRD) method with two treatment factors and 3 replicates. This study can be recommended treatment with a level of P2 (40 ml/L) can increase plant height, number of leaves, leaf area, leaf chlorophyll, number of productive saplings, number of panicles, panicle length, number of stomata, weight of 1000 grains and weight of grains in gogo rice plants while the application of NPK fertilizer is recommended with a level of N2 of 300 kg/ha (1.5 g/polybag) to increase plant height, number of leaves, leaf area, leaf chlorophyll, number of productive saplings, number of panicles, panicle length, weight of dry grain/plant, weight of 1000 grains, weight of wise grain and production of tons/ha.

Keywords: Macro Nutrition, Photosynthetic Microorganism, Staple Food