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STUDY OF LIQUID ORGANIC FERTILIZER CONCENTRATION ON THE GROWTH AND PRODUCTIVITY SOME OF SWEET SORGHUM VARIETIES (*Sorghum bicolor*, L.Moench). Under the guidance of Bargumono, and Mustadjab HK.

ABSTRACT

The aim of this study is to obtain the best combination between the concentration of liquid organic fertilizer and sorghum varieties, to determine the concentration of liquid organic fertilizer that gives the best results in the cultivation of sorghum, to determine which of sorghum varieties that gives the best result on growth and productivity. The experiment was conducted in Tapan, Purwomartani, Kalasan, Sleman from August to November 2014. The study was conducted by field experiments using split plot design (metode split plot), with two factors, the main plot are sweet sorghum varieties (Patir 3, Patir 9, Saber) and the sub plots are liquid organic fertilizer concentrations (1%, 2%, 3%). Observation data to determine whether the treatment effect, were analyzed using analysis of variance with its diversity 5% significance level. To know the real difference between treatments followed by Duncan's Multiple Range Test at 5% significance level. Results of analysis of variance showed there is no interaction between a kind of sorghum varieties and concentration of liquid organic fertilizer. Sorghum Patir 9 is superior compared to sorghum Patir 3 and Mandau on parameters of leaf area age 3 WAP, dried plant weight age 3, 4, 6 WAP, dried seeds weight per panicle, dried grain weight per plot, number of seeds per panicle, dried weight of seeds per hectare. While the parameters of the fresh weight of stem and stem sugar levels Patir 3 better than Patir 9 and Mandau. Sorghum Mandau best only at the parameters of dried weight of 1,000 seeds. While the treatment of liquid organic fertilizer concentrations (1%, 2%, 3%) was not significantly different effect on all parameters.

Keywords: sweet sorghum, liquid organic fertilizer, varieties