

The Effect of Plant Distance and N (Urea) Fertilizer on Sorghum (*Sorghum bicolor* L.) Production

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ABSTRACT

This study aims to determine the effect of spacing and N fertilizer application on the growth and production of sorghum. The research was conducted for 4 months from November 2019 to February 2020. All activities were carried out in Glidung Village, Wonosari District, Bondowoso Regency. This study used a factorial randomized block design (RBD) with 2 factors, namely spacing and N fertilizer. The spacing factor consists of 3 levels, namely the spacing of 70cm x 20cm, 50cm x 20cm, and 40cm x 25cm, while the urea fertilizer factor consists of 3 levels, namely urea fertilizer 100kg / ha, urea fertilizer 150 kg / ha, and urea fertilizer 200 kg / ha. Data were analyzed using ANOVA and then further tested with DMRT. The results showed that the spacing of 40cm x 25cm gave significantly different results on the parameters of wet grain weight per sample, wet grain weight per plot, dry grain weight per plot, dry grain weight parameters per sample. Treatment spacing 40cm x 25cm gave the best results 170.73 grams in wet weight / sample; wet weight / plot, namely 2940.44 grams; dry weight / sample, namely 104.20 grams; and dry weight / plot is 2109.44 grams. In the parameters of plant height and stem diameter, the treatment of spacing and urea fertilizer showed insignificant differences. However, there was an interaction between the spacing of 40 cm x 25 cm and the application of 100 kg / ha of N fertilizer on the parameter of wet grain weight per sample.

Keywords: *Sorghum, plant spacing, fertilizer urea*