



EFFECT OF NITROGEN FERTILIZER ON GROWTH AND YIELD OF SESAME (*SESAMUM INDICUM L.*) VARIETIES IN BAUCHI STATE, NIGERIA

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ABSTRACT

The experiment was conducted at the Abubakar Tafawa Balewa University teaching and research farm Bauchi, Bauchi State in 2012 and 2013 rainy seasons. The treatments consisted of nitrogen fertilizer rate of 0, 20, 40, 60 and 80kg N/ha and three different varieties of sesame (NCIR BEN 01M, NCIR BEN 02M and Ex-Sudan). The experiments were factorially combined and laid out in a Randomized Complete Block Design, replicated three times in both seasons. The results of the experiments showed that, nitrogen fertilizer had significant ($P<0.05$) effect on the growth and yield of sesame plant. The application of nitrogen fertilizer at 60 kg N/ha significantly ($P<0.05$) increased plant height, leaf area, number of branches, number of capsules per plant and yield/hectare of sesame plant in both 2012 and 2013 rainy seasons. It was also observed that, Ex-Sudan variety significantly ($P<0.05$) had higher plant height, leaf area, number of branches, number of capsules per plant and yield/hectare than the other two varieties. Based on the results obtained, it can be concluded that, the application of 60 kg N/ha to sesame varieties especially Ex-Sudan can be adopted by farmers in the study area for maximum yield.

Keywords: Bauchi, Nigeria, Nitrogen Fertilizer, Sesame, Varieties.