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# EFFECT OF NPK FERTILIZER AND COW DUNG ON SOME GROWTH CHARACTERS OF EXTRA-EARLY MAIZE (*Zea mays* L.) IN BAGAUDA KANO STATE, NIGERIA

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## ABSTRACT
Field experiments were conducted at Bagauda Agricultural Research Station, Ministry of Agriculture Kano State, Nigeria during the 2015, 2016 and 2017 wet seasons to determine the response of growth and yield parameters of Extra Early maize variety grown at different levels of NPK fertilizer and cow dung. The experiment consisted of 16 treatments with four rates of NPK fertilizers (0, 60, 90 and 120 kg/ha rates of NPK 15: 15: 15) and four rates cow dung (0, 6, 7 and 8t/ha rates of Cow dung). The treatments were factorially combined and laid out in a Randomized Complete Block Design (RCBD) and replicated four times. The growth parameters assessed include plant height, number of leaves per plant, leaf area and leaf area index. The results revealed that most of the parameters assessed were significantly affected by fertilizer and cow dung application levels. These parameters differed significantly with NPK fertilizer and cow dung with the highest increment (120 kg/ha of NPK 15: 15: 15) and (8t/ha COD) producing higher values. Interaction between NPK fertilizer and cow dung was significant in most of the parameters studied. Correlation matrix among various parameters as influenced by NPK fertilizer and cow dung revealed significant and positive associations at 0.01 and 0.05 level of probability. From the results of this investigation, it could be suggested that application of NPK fertilizer at the rate of 120 kg/ha of NPK (15: 15: 15) with COD rate of 8t/ha could be used in Extra early maize production to achieve maximum productivity in Bagauda Kano and related ecologies of the world.

**Keywords:** Cow dung, Extra-early maize, Growth characters, NPK fertilizer.