

## Effects of Intercropping Maize (*Zea mays* L.) with Jack Beans (*Canavalia ensiformis* L.) at Different Spacing and Weeding Regimes on Crops Productivity

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**Abstract :** A field experiment was conducted at Ido town in Ido Local Government Area of Oyo state, Nigeria to determine the effects of intercropping maize (*Zea mays* L.) with Jack bean (*Canavalia ensiformis* L.) at different spacing and weeding regimes on crops productivity. The treatments were 2 x 2 x 3 factorial arrangement involving two spatial crop arrangements. Spacing of 75 cm x 50 cm and 90 cm x 42 cm (41.667 cm) with two plants per stand resulted in plant population of approximately 53,000 plants/hectare. Also, Randomized Complete Block Design (RCBD) with two cropping patterns (sole and intercrop), three weeding regimes (weedy check, weeds once, and weed twice) with three replicates was used. Data were analyzed with SAS (Statistical Analysis System) and statistical means separated using Least Significant Difference (LSD) ( $P \leq 0.05$ ). Intercropping and crop spacing did not have significant influence on the growth parameters and yield parameters. The maize grain yield of 1.11 t/ha obtained under sole maize was comparable to 1.05 t/ha from maize/jack beans. Weeding regime significantly influenced growth and yields of maize in intercropping with Jack beans. Weeding twice resulted in significantly higher growth than that of the other weeding regimes. Plant height at 6 Weeks After Sowing (WAS) under weeding twice regime (3 and 6 WAS) was 83.9 cm which was significantly different from 67.75 cm and 53.47 cm for weeding once (3 WAS) and no weeding regimes respectively. Moreover, maize grain yield of 1.3 t/ha obtained from plots weeded twice was comparable to that of 1.23 t/ha from single weeding and both were significantly higher than 0.71 t/ha maize grain yield obtained from the no weeding control. The dry matter production of Jack beans reduced at some growth stages due to intercropping of maize with Jack beans though with no significance effect on the other growth parameters of the crop. There was no effect on the growth parameters of Jack beans in maize/jack beans intercrop based on cropping spacing while comparable growth and dry matter production in Jack beans were produced in maize/Jack beans mixture with single weeding.

**Keywords :** crop spacing, intercropping, growth parameter, weeding regime, sole cropping, WAS, week after sowing

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