



## Effect of Weed Control by Containment and Weeding Frequency on the Growth and Yield of Cucumber in Abakaliki, Southeastern Nigeria

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**Abstract:** Growth and yield response of cucumber to weed control by containment technique (plant density and weeding frequency) was observed in 2014 and 2015 planting seasons at the Ebonyi State University, Abakaliki southeastern Nigeria. The design was a 5x3 factorial experiment in a randomized complete block design. Factor A was five weeding frequencies [0, 2, 4, 6 and 8 weeks after planting (WAP)], while factor B was three plant densities (41,667, 33,333 and 27,778 plants ha<sup>-1</sup>). The highest fresh weed weight (93.62g plot<sup>-1</sup>) was at 0WAP on the lowest plant density, showing that critical period of weed infestation in cucumber is not localized in this study. Two WAP significantly influenced growth and yield parameters. The highest plant density (41,667) suppressed weed growth earlier and also gave the highest fruit yield (1.11 kg plant<sup>-1</sup>), having a weed suppression ability of 52.86 in 2014 and 43.75 per cent in 2015. Eight WAP gave the highest fruit yield (1.17 kg plant<sup>-1</sup>). The highest plant density weeded 2WAP produced 1.60 kg, 1.20 kg at 8WAP and 0.93 kg plant<sup>-1</sup> at 0WAP. Therefore, high plant density and a single weeding at 8WAP will reduce cost of production without adverse effect on growth and yield in cucumber at a zero threat to the environment. Hence, weed control by containment technique is sustainable and is highly recommended in cucumber production among the smallholder farmers of developing nations of the world.

**Keywords:** Containment technique, Plant density, Weeding frequency, Critical weed period

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