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**EFFECTS OF ARTIFICIAL DEFOLIATION DURING THE
REPRODUCTIVE STAGE ON SUBSEQUENT GROWTH
AND YIELD OF OKRA
(*Abelmoschus esculentus* L.)**

BY

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ABSTRACT

An experiment was conducted at the Agronomy farm of the Eastern University in the Yala 2014 to investigate the effects of artificial defoliation during the reproductive stage on subsequent growth and yield of okra cultivar P₂₃. The treatments consisted of five defoliation practises. T₁ where no leaves were removed served as the control. The first leaf was defoliated in the T₂ treatment. The first and third leaves were plucked in the T₃ treatment. The first, third and fifth leaves were clipped in T₄ Treatment whereas the first, third, fifth and seventh leaves were plucked in the T₅ treatment. The experiment was laid out in a Randomized Complete Block Design with the afore said treatments with four replications. Destructive sampling was done during the podding, mid podding and late podding stages. The results revealed that there were significant ($P \leq 0.05$) differences between treatments in the plant heights, leaf area index (LAI), leaf dry weights, pod dry weights, stem and root dry weights, Net Assimilation Rate (NAR), Relative Growth Rate (RGR), pod length, pod girth and Harvest index (HI). Among the treatments the highest attributes were found in the T₃ treatment on plant heights, leaf area index (LAI), leaf dry weights, pod dry weights, stem dry weights, Net Assimilation Rate (NAR), Relative Growth Rate (RGR), pod length, pod girth and Harvest index (HI) except the root dry weight. The control treatment (T₁) where no leaves were removed showed the highest root dry weight than the other treatments and the lowest values were found in the T₅ treated plants during the podding and mid podding stages. The highest yield of 13.5 t.ha⁻¹ was recorded in the T₃ treatment whereas the lowest one (7.9 t.ha⁻¹) was found in the T₅ treatment. From these results it was found that defoliating the first and third leaves has caused remarkable positive changes in the growth physiological attributes and yield of okra except that was found

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