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### Effects of Paclobutrazol on Podding and Photosynthetic Characteristics in Peanut

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**Abstract:** The effects of paclobutrazol (PB) on podding habits and photosynthetic characteristics ( $\text{CO}_2$  assimilation rate, quantum yield of photosystem II ( $\Phi_{\text{PSII}}$ ) and chlorophyll content) were examined in peanut. Application of PB at the start of the pod formation stage increased the percentage of podding, particularly in early-blooming flowers and seed yield. The major factor for this effect may be an acceleration of dry matter distribution to the early-bearing pods, which resulted from the inhibition of stem growth by PB. Application of PB at the early pod-formation stage increased chlorophyll content and  $\Phi_{\text{PSII}}$ , resulting in enhanced  $\text{CO}_2$  assimilation rates. In the long term, PB tended to increase crop growth rate and net assimilation rate though not significantly. The effects of PB on the photosynthetic characteristics, however, were observed only during a short period at a restricted growing stage, suggesting that an increase in the photosynthetic rate would not be the main factor for the PB-induced increase in seed yield.

**Keywords:** [Arachis hypogaea L.](#), [Chlorophyll content](#), [CO<sub>2</sub> assimilation rate](#), [Paclobutrazol](#), [Percentage of podding](#), [Quantum yield of photosystem II](#), [Yield](#)



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