

SHORT COMMUNICATION

Optimization of number of offshoots in date palm (*Phoenix dactylifera* L.)

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ABSTRACT

*Date palm (*Phoenix dactylifera* L.) is a one of the important fruit crop in arid and semi-arid regions of the world. The major method of the propagating date palm vegetatively is through offshoots and tissue culture. However, the retention of excessive offshoots on a mother plant can impact growth, fruit yield, and economic returns due to resource competition. The objective of the current study was determining the optimal number of offshoots per plant for maximizing productivity while maintaining sufficient offshoot for propagation. The study was conducted during 2019-2023 using the high offshoot-bearing genotype MDP-29 and examined the impact of offshoot retention (0, 2, 4, 6, and 8 per plant) on growth and yield. Results showed that increasing the number of offshoots reduced plant growth, canopy spread, and yield, with fruit production declining by almost forty percent. The optimum number of offshoots for optimized fruit yield is four per palm.*

Keywords: *Date palm, offshoot retention, fruit yield, resource allocation, propagation*