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**Factors that impact *Phalaenopsis* flowering and inflorescence quality**

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*Phalaenopsis* is a popular floricultural crop known for its moth-shaped flowers and long-lasting blooms. Its succulent leaves and roots allow it to withstand severe shipping conditions. Additionally, the flowering of *Phalaenopsis* can be easily controlled by temperature, making it the most valued ornamental crop internationally. A temperature range of 19-23°C is optimal for triggering spiking and flower induction for most cultivars of *Phalaenopsis*. In commercial production, high temperatures exceeding 28°C inhibit its reproductive growth, facilitating manipulation of flowering. Adequate light intensity is also crucial for optimal flowering, with the daily light integral being the main factor affecting spiking, while photoperiod has little to no effect. High carbohydrate content in plant enables it to endure darkness stress during shipping and is also the key factor impacting the inflorescence quality. Low temperature acclimation before container shipping prevents leaf yellowing and chilling injury during shipping. Both low temperature forcing and $CO_2$ enrichment increase the sucrose content in leaves. Elevated $CO_2$ levels might have a positive effect on the vegetative growth of *Phalaenopsis* but may lead to flower abortion after long-term treatment. Nitrogen is crucial for *Phalaenopsis* growth, and mature leaves and roots are the main nitrogen storage organs. During the reproductive stage, inflorescences are major nitrogen sinks and even though *Phalaenopsis* can bloom without or with limited application of fertilisers, optimal flowering and subsequent growth are only achieved with the provision of adequate nutrition during both vegetative and reproductive stages. A higher $NO_3$-N/$NH_4$-N ratio is recommended for better vegetative growth and higher spiking percentage, lateral branching, as well as flower count and size. A fertigation level of 100-200 $mg \cdot L^{-1}$ N is recommended, depending on the growing substrates used.

Keywords: flower induction, flowering performance, flowering regulation, low-temperature forcing, moth orchid, phalaenopsis