

Title Carbohydrate metabolism in dendrobium flowers after harvest
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Abstract

Inflorescences of *Dendrobium* cvs. Pompadour, Misteen, Sakura, Caesar and Intuwong with removal of 0, 50 and 100% open florets were held in the distilled water at 25°C for 15 days. The results showed inflorescences without removal of open florets had less dropping of flower buds and more opening of flower buds than those with removal of 50 and 100%, open florets. Inflorescences of *Dendrobium* 'Pompadour' with removal of 0, 50 and 100% open florets had the most dropping of the flower buds compared to other cultivars. *Dendrobium* 'Pompadour' open florets had more reducing sugars (RS), total sugars (TS) and total non-structural carbohydrates (TNC) contents than flowers buds and large flower buds (old buds) had more RS, TS, TNC contents than small flower buds (young buds). But small flower buds had more non-reducing sugars (NRS) contents than large flower buds. As the holding time advanced, flower buds of inflorescences without removal of open florets had more NRS, RS, TS, TNC contents than those with removal of all open florets. Flower buds in inflorescences with removal of 50% open florets had more NRS, RS, TS, TNC contents than those with removal of all open florets. In final day both large and small flower buds had almost the same NRS, RS, TS, TNC contents. Flower buds had more NRS content than open flowers right after harvest and during holding time. Data suggested that there was a sugar translocation between open florets and flower buds in flower buds of *Dendrobium* after harvest.