

Title Effects of growth conditions on postharvest *Botrytis* infection in gerbera – a nursery comparison
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Abstract

Botrytis cinerea is one of the main postharvest problems in gerbera cut flowers. There are clear differences among growers in the percentage of flowers showing symptoms of *Botrytis* infection after harvest. Because the factors causing these differences are uncertain, cultivation parameters of twelve different growers were followed and a nursery comparison was carried out. Gerbera flowers 'Dino' were sampled twelve times; six times in autumn 2006 and six times in spring of 2007. At the nurseries climate (air temperature, relative humidity, light intensity and CO₂ concentration) was logged, and plant density, plant age and other characteristics were monitored. Before each harvest *Botrytis* spores were trapped in the greenhouses and counted. After sampling, flowers were treated according to a standard transport simulation. Thereafter *Botrytis* infection was monitored, and statistical analyses were performed on the effect of the pre-harvest conditions on *Botrytis* infection in the postharvest stage. Clear influence of the spore level in the greenhouse was observed. When a sufficient number of spores were present in the greenhouse environment, the humidity level and the intensity and duration of irradiation had the strongest influence on infection. In general, factors those lead to a dry microclimate such as the use of ventilators, the use of supplemental lighting and a low plant density were related with a lower number of lesions on gerbera petals in the postharvest phase.