

### **Abstract**

A number of pre- and postharvest factors were investigated to determine their influence on postharvest rot resistance in carrots and pak choi. Pak choi plants cv. Sumo were grown hydroponically, receiving 9 combinations of calcium and nitrogen concentration, during the 3 week growing period. The plants were then harvested, wound inoculated with soft rot bacteria and stored under conditions favouring rot development. Both calcium and nitrogen had an effect on the incidence and severity of postharvest rot. Plants grown with high levels of nitrogen and low levels of calcium were the most susceptible. Postharvest conditions including inoculum dose, inoculation position, storage, temperature and wrapping were tested on three cultivars each of carrot and pak choi artificially inoculated with *Erwinia carotovora* spp. *carotovora*. Wrapping, storage temperature and position of the wound influenced rot development of carrots while in pak choi the results were more varied. Rot incidence increased with inoculum dose while cultivar appeared to have little effect. Postharvest spoilage is a complex problem which may be affected by many factors. Understanding these factors will allow us to reduce losses by implementing more appropriate production and storage regimes.