Title Effect of nitric oxide on postharvest quality and vase life of carnation cut flower

Author Ayoub Molaahmad nalousi, Mohammad Aghaifard

Citation Abstracts of 7th International Postharvest Symposium 2012 (IPS2012). 25-29 June, 2012. Putra World Trade Centre (PWTC), Kuala Lumpur, Malaysia. 238 pages.

Keywords Antioxidant; enzymes; vase life; senescence

Abstract

Nitric oxide (NO) is a highly bioreactive molecule that targets either a redox or an additive chemistry, and accordingly reacts with metal- and thiol- containing proteins including signaling proteins, receptors, enzymes, transcription factors and DNA. In many plant systems, by down-regulating ethylene production, NO delays senescence. In order to study the effect of NO on vase life, water uptake, POD, LOX and chlorophyll of cut flower carnation 'Tempo', this experiment was conducted in randomized complete block in 3 repeat on pulsing method (for 24 h) designed. Cut flower were kept in pots containing NO concentrations (0, 25, 50, 75 and 100 $\mu l\ l^{-1}$) and water as control, and in all treatment 7% sucrose was used. The presence of the nitric oxide donor increased the activities of peroxides (POD) and lipoxygenase (LOX). The effects of NO concentrations on the vase life, water uptake, POD, LOX were significant at 1 % levels of probability. NO treatment with 100 $\mu l\ l^{-1}$ for 24 h 19.6 days vase life