

Exogenous nitric oxide delays ripening and maintains postharvest quality of pointed gourd during storage

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Journal of Plant Growth Regulation 40: 2371–2378. 2021.

Abstract

This study was aimed to assess the effect of nitric oxide (NO; 1 and 2 mM) on shelf life and quality of pointed gourd. Fruits were stored at 12 °C for 14 days with simulated ambient storage for 3 days (7 + 3 and 14 + 3) to mimic the marketing period. NO treatment significantly improved the postharvest shelf life as compared to control samples. The fruits underwent to the application of NO (2 mM) effectively maintained the chlorophyll, phenolics, antioxidant activity and membrane integrity. It suppressed weight loss, yellow color development, lignin formation, and electrolytic leakage. Activity of enzymes (PAL and LOX) was also influenced positively by NO application. Postharvest treatment of NO (2 mM) could be suggested as an eco-safe and effective technique for enhancing the shelf life without hampering quality of pointed gourd.