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Ripening regulation and post-harvest life improvement of banana cv. MALBHOG using plant extracts and modified atmosphere package

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ABSTRACT : A study on ripening regulation and post-harvest life improvement of banana cv. MALBHOG using different plant extracts and modified atmosphere package was under taken to assess the effect of plant extracts and modified atmosphere package on banana fruit ripening and quality parameters after harvest under ordinary room condition. The experiment was conducted at Central laboratory of Post-Harvest Horticulture of Agriculture and Forestry University, Rampur, Chitwan, Nepal from 3rd May to 31st May 2016. The experiment consisted of eight treatments, control, garlic extracts, *Neem* extracts, onion extracts, sesamum oil, ginger extract, unperforated low density poly ethylene (50 µm) containing cotton soaked with KMnO₄ and perforated low density polyethylene (50 µm) containing cotton soaked with KMnO₄, respectively that were replicated thrice. Different post-harvest parameters were recorded in two days interval for 15 days in the second experiment. In this experiment, the minimum physiological loss in weight on the final day of storage was observed in fruits kept inside the unperforated low density polyethylene containing cotton soaked with KMnO₄ (7.46 %). The highest colour score (7.00) and the lowest firmness were noted with control (0.467 kg/cm²). The highest pulp to peel ratio was recovered with control (4.075) and the lowest with unperforated low density polyethylene containing cotton soaked in KMnO₄ (3.007) followed by *Neem* extracts (3.087). The highest TSS content was noticed in control (19.37°Brix) on 15th DAS while the highest titratable acidity was obtained with neem extract. The maximum vitamin C content (6.633 mg/100 g) was recorded with neem extract. The unperforated LDPE containing cotton dipped in KMnO₄ resulted in longer shelf-life (27 days). The minimum disease incidence was noticed with the unperforated LDPE containing KMnO₄ (25 %) followed by neem extracts.

KEY WORDS : Banana, Plant extract, Modified atmosphere package, Postharvest

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