**Effect of Light Colour Combinations from Light Emitting Diodes (LED) on Post-Harvest Qualities of Ambul Banana (*Musa spp*)**

G.R.Maduwanthi1, P.K.Dissanayake1\*

*1 Department of Export Agriculture, Faculty of Agricultural Sciences, Sabaragamuwa University of Sri Lanka, Belihuloya, Sri Lanka*

*\** [*prasajith@yahoo.com*](mailto:prasajith@yahoo.com)

Banana (*Musa spp*) is grown in more than 120 countries worldwide. Banana production has been ranked second in world fruit production. Post-harvest losses of banana is relatively high (20-30 %) due to climacteric and perishable nature of the fruit. Nowadays, the use of artificial fruit ripening agents has become prevalent mostly due to the commercial purposes. In other hand, lots of health problems are occurred due to artificial ripening agents. Therefore, this study was conducted to investigate the effect of light colour combinations from LEDs on the post-harvest qualities of mature green Ambul bananas during post-harvest storage. Different colour combinations of LEDs were used to evaluate fresh weight loss, peel colour, pH, Total Soluble Solid, Ascorbic acid, in vitro microbial growth and sensory evaluation. Mature green bananas were stored under blue and yellow LED colour combination, blue and red LED colour combination, white colour and dark condition for 8 days. In combination treatments, one light was on from 8.00am to12.00 noon and other light was on 12.00 noon to 4.00pm. Night time no light was provided. The experiment was conducted in Completely Randomized Design with three replicates. Blue and Yellow colour combination and Blue and Red colour combination has considerably effect on the ripening, nutritional qualities and in vitro microbial growth of mature green bananas during post-harvest storage.

**Keywords:** *colour combination treatments, light emitting diodes, post-harvest quality.*