Annual Congress on
Plant Biology and Plant Breeding
August 27-28, 2021 | Webinar
Volume: 0

UV-C Irradiation to Extend the Shelf Life of Cherry Tomato

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Tomatoes (Lycopersicon esculentum) are popular for consumption all over the world, but due to the fact that after harvesting, tomatoes change their internal composition leading to their deterioration, resulting in short shelf life. Therefore, the objective is to study the effect of UV-C irradiation on the quality of Cherry tomatoes. UV-C irradiation at 2 kJ m-2 and storage at 5° C for 28 days. After 28 days of storage, UV-C had a weight loss of 0.49%, which is more than control treatments (0.37%). UV-C irradiation was able to slow down the reduction of the firmness value of 5.3 N, which is greater than the control treatment (4.7 N). UV-C irradiation was able to delay the reduction of the firmness equal to 5.3 N, which is greater than the control treatment (4.7 N), stimulate the accumulation of vitamin C, the values were 33.2 and 31.6 mg / 100 g ml in UV-C treatment and control, respectively, stimulates the accumulation of antioxidant content (1.18-1.2 AAE / g FW), and stimulate the accumulation of flavonoid compounds 14.1 and 12.1 mg / 100 g FW in UV-C treatment and control, respectively. Including stimulating lycopene accumulation in cherry tomatoes was 5.16 while control treatment was 4.89 mg / 100 g FW of lycopene. UV-C irradiation is effective in maintaining the quality and extending the shelf life of cherry tomatoes.

Biography

Panumas Kotepong is currently working as a senior scientist at the Department of Agriculture,Thailand. He has received his Ph.D. on horticuture from Kasetsart University, Thailand and postdoctoral studies on plant biology from Lincoln University, New Zealand. He has authored several publications in various journals and books. His publications reflect his research interests in postharvest technology and plant biochemistry

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