**Effect of Selected Commercial Rooting Hormones on Air-Layering**

**of Jackfruit (*Artocarpus heterophyllus* Lam.)**

**KWASP Thakshila1\*, PK Dissanayaka1and RL Senanayake2**

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

*2Fruit Crops Research and Development Station, Gannoruwa, Peradeniya, Sri Lanka*

*\**[*priyanithakshila96@gmail.com*](mailto:priyanithakshila96@gmail.com)

Jackfruit (*Artocarpus heterophyllus* Lam.) belongs to the family Moraceae and is the most important, popular, and functional tree in tropical home gardens. Vegetative propagation is an asexual method of plant reproduction. Air layering is a plant propagation technique in which a plant stem is wounded with a girdle stem and enclosed the wounded stem with a moist rooting medium until adventitious roots develop from the wounded area. Therefore, this experiment was conducted to find out the effect of commercially available rooting hormones on air layering of three jackfruit varieties “Farther long”, “Hirosa” and “Maharagama”. The Plant fix® 122.22ppm (2.5mL+distilled water1L), Roocta® 1.75ppm (0.5g+distilled water1L) and control (distilled water1L) were the treatments used for all three varieties. The experiment was carried out at Fruit Crops Research and Development Station, Gannoruwa, Peradeniya. Three treatments were tested (including the control with distilled water) in a Randomized Complete Block Design (RCBD) with three replicates. Callus diameter (mm), callus weight (g), root primordia weight, diameter of root primordia (mm), number of root primordia and survival percentage (%) were measured end of the eight-week interval. Diameter of root primordia of “Hirosa” and “Maharagama” showed significant difference under Plantfix. Diameter of root primordia of “Fartherlong” was shown significant difference under control treatment. All the parameters were shown significant difference against the plantfix in “Hirosa”. Number of root primordial in “Fartherlong” and “Maharagama” showed significant difference for the plantfix and “Hirosa” shows for Roocta. Both callus diameter and callus weight of “Fartherlong” was shown significant difference under control and Plantfix. Root primordia weight and diameter of root primordia of “Fartherlong” shown significant difference against the control. It is concluded that plant fix can recommend for “Maharagama”, “Farther Long” and “hirosa” varieties.

**Keywords**: *adventitious rooting, air-layering, jackfruit, rooting hormones, vegetative propagation*