

FRUIT PEEL AND EGG SHELL AS A  
FERTILIZER ON THE GROWTH AND  
DEVELOPMENT OF CHILLI PLANT

*(Capsicum frutescens)*



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## ABSTRACT

Chemical fertilizers' inability to optimize crop productivity over time without polluting the environment. This study was aimed to find out effect of fruit peel (banana peel, orange peel, papaya peel and egg shell) on growth and development of bird chilli. The experiment was conducted at home garden, Dankotuwa, Puttalam District. For this experiment, bird chilli (*capsicum frutescence*) variety was used. Research was carried out using Complete Randomized Design (CRD) with four treatments and four replicates for each treatment. Treatments were T<sub>0</sub> – control (no fruit peel powder and egg shell powder), T<sub>1</sub> - 2g of banana powder + 0.5g of egg shell powder, T<sub>2</sub> - 2g of papaya powder + 0.5g of egg shell powder, T<sub>3</sub> - 2g of orange powder + 0.5g of egg shell powder. Fruit peels and egg shells were collected from houses, bakery and fruit juice bar of the village. The seeds of bird chilli (*capsicum frutescence*), black Polybags and compost were obtained from agriculture farm, Dankotuwa. The size of a polybag was 45cm height and 30cm diameter. Polybags were filled with potting mixture (sand: compost: top soil 1:1:1) leaving a space of 10 cm at the top of the polybag. Holes were made on bottom of the bags to drain water. All the pots were kept at 30cm apart from each. Fruit peels and egg shell powder significantly increases ( $p < 0.05$ ) the height, number of leaves, leaf area, leaf area index, number of branches/per plant and days for 50% and 100% of flowering in bird chili plants. From this study, it was found that the fruit peel and egg shell powder significantly increased the growth and yield of bird chilli (*Capsicum frutescence*) when compared with the control. T<sub>1</sub> (banana peel powder 2g+ egg shell 0.5g) showed the best performance among the treatments.

Key words: fruit peels, egg shell, organic fertilizer, inorganic fertilizer

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