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Effect of potting media on bulb yield of red onion (*Allium ascalonicum* L.)

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An experiment was carried out at the Agronomy farm of the Eastern University, Sri Lanka to evaluate the effect of potting media on bulb yield of red onion (*Allium ascalonicum* L.) grown in different potting media. In the study, sandy soil, top soil, cow dung, coir dust and paddy husk ash were used as potting materials for the preparation of media. Four different media were tested to select the best potting medium for cultivation of Red onion, variety *vethalam*. The experiment was laid out in a Complete Randomized Design (CRD) with four treatments and five replications. Tested media contained different potting materials at different ratios (v/v) such as medium - 1 (T_1) used as control contained sandy soil: top soil: cow dung at ratio of 4:2:2, medium - 2 (T_2) contained sandy soil: cow dung: coir dust at ratio of 6:2:1, medium - 3 (T_3) contained sandy soil: cow dung: paddy husk ash at ratio of 6:2:1 and medium - 4 (T_4) contained sandy soil: cow dung: coir dust :paddy husk ash at ratio of 12:4:1:1. Media were prepared two weeks before the planting of bulbs and filled into poly bags (50 cm diameter and 25 kg capacity). Onion bulbs were planted in each poly bag (pot) containing potting medium and other agronomic practices were carried out as recommended by the Department of Agriculture, Sri Lanka. At the time of harvesting of bulbs, the number of bulbs per plant, bulb diameter, bulb length and bulbs weight per pot (yield/pot) were recorded in each treatment and analyzed using Statistical Analysis System (SAS) soft ware package.

The results indicated that composition of potting media has a significant effect ($p < 0.01$) on yield parameter of red onion**.** Medium (T_3) contained sandy soil, cow dung and paddy husk ash at ratio (v/v) of 6:2:1 gave significantly ($p < 0.01$) high number of bulbs per plant and high bulb yield per pot (451.3 g per pot) among tested media. Yield obtained in medium T_1 T_2 and T_4 were 199.52 g/pot, 341.81 g/pot and 365.81 g/pot respectively. Further it was noted that the yield in medium T_3 increased more than two fold compared to the control (T_1). Paddy husk ash used as a potting material in potting medium would increase the bulb yield of red onion in the pot culture technique.

Keywords: **Bulb yield, coir dust, cow dung, paddy husk ash, red onion**