

**INFLUENCE OF REDUCTION IN PLANT SPACING
ON SEED YIELD OF BIG ONION (*Allium cepa* L.),
VARIETY AGRI FOUND LIGHT RED
UNDER YALA SEASON**

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By
RUWANI THANUJA WASALTHILAKE

**Faculty of Animal Science and Export Agriculture
Uva Wellassa University**

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ABSTRACT

Big onion (*Allium cepa* L.) is an essential condiment in Sri Lankan diet so that it is cultivated in Sri Lanka. Minimizing the land area devoted for big onion seed production is a challenge and one way to overcome this challenge is to explore the possibilities of increase in plant density by decreasing plant spacing without affecting seed yield. The objective of the present study was to ascertain the influence of reduction in plant spacing on big onion seed yield of variety Agri found light red which is popularly cultivated in Sri Lanka. Two plant spacing; 17.78 cm×17.78 cm and 15.24 cm×15.24 cm were used in the experiment which was laid out in a Completely Randomized Design with 10 replications. Number of umbels per 1m², number of florets per umbel, percentage of fertile florets per umbel, number of seeds per fertile floret, 1000 seed weight and seed yield per plant was measured. No significant effect on final seed yield of big onion was found between the plots with high and low plant spacing indicating that land area for a given target production of big onion seed can be saved through reduction in plant spacing from 17.78 cm × 17.78 cm to 15.24 cm×15.24 cm or eventual increase in plant density. Increased plant density significantly increased (P<0.03) the number of umbels per unit land area but significantly decreased (P<0.025) the number of florets per umbel without significantly changing percentage of fertile florets, number of seeds per fertile floret and 1000 seed weight. However, the gain in seed yield due to increase in number of umbels per unit land area was higher than the loss in seed yield due to decrease in number of florets per umbel as increase in plant density due to decreased plant spacing did not significantly reduce the final seed yield of onion.