

**B-18 : IMPROVEMENT OF BULB QUALITY AND YIELD OF
LARGE ONION (*Allium cepa* L.) BY NITROGEN AND
POTASSIUM FERTILIZER MANAGEMENT**

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The large onion (*Allium cepa* L) is an important high value cash crop in the dry zone of Sri Lanka. Both bulb yield and quality are equally important to increase the profit margin. Level of nutrients especially nitrogen and potassium could be one of the parameters which determine the bulb yield and quality of large onion.

An experiment was conducted in Reddish Brown Earth (RBE) soils at the Regional Agricultural Research Centre at Maha Illuppallama and also in a farmer's field in the Mahaweli "H" area to investigate the effect of nitrogen and potassium on the bulb yield and quality of large onion.

Results indicated that irrespective of the level of potassium added, the bulb yield increases linearly with the increase of nitrogen level up to 225 kg/ha which is the highest level tested in the study. However, a significant increase in the number of bulbs with thick neck (poor quality) was recorded with the increase of nitrogen level. No significant yield or quality improvement was recorded due to the addition of potassium, most probably due to high soil K level (0.3 meq/100 g of soil), in both locations.

It could be concluded that in RBE soil, the addition of more than 75kg of nitrogen per hectare is not suitable for large onion. Application of potassium would not be necessary when grown in soils with high potassium level (above 0.3 meq/100 gm)