EFFECT OF SULFUR ON GROWTH, YIELD AND BULB QUALITY OF RED ONION (*Allium cepa*) GROWN IN NON CALCIC BROWN SOILS

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Onion is one of the oldest vegetables in Sri Lanka and present per capita consumption in the country is about 10kg. It is known that the consumer acceptance of fresh and dried onions is mainly determined by its pungency. The productions of onion in low sulfur environment reduce the pungency of onion. The relative pungency of onion has both genetic and environmental components. The onion is very efficient to uptake and sequesters sulfur from the soil.

To address this problem a field study was carried out in *YALA* (2008) season at the Regional Agriculture Research and Development centre Aralaganwila, Sri Lanka. In this study the interactive effects of five treatments and control, which were combinations of five levels of elemental sulfur fertilizer were studied (10, 15, 20, 25 and 30 kg/ha). The experimental design was Randomized Complete Block Design (RCBD) with three replicates. Characteristics associated with the plant height, pungency, fresh and dry weight of onion, total soluble solid, number of set per plant were evaluated. Results revealed that sulfur fertilization, especially at 20 kg/ha, significantly increased plant height, fresh and dry weight of onion ($p \leq 0.05$). Total solids, pungency, number of set per plant were increased significantly by application of sulfur at a rate of 20 kg/ha. Therefore it can be recommended application of sulfur at the rate of 20 kg /ha to enhance the growth and pungency of onion in Non Calcic Brown soils.

Key words: Onion, Pungency, Sulfur, Non Calcic Brown soils, Total soluble solid, Yield, Plant height