

Effect of gypsum on growth and biochemical parameters in onion (*Allium cepa* L.)

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ABSTRACT : Onion is one of the commercial vegetable crops of India. Gypsum has been recognized as an important nutrient for higher yield and quality of onion bulbs. A positive significant interaction was found between Ca and S; with increase in level of calcium from the presence of various S presence of Ca⁺ ion facilitates S uptake and stimulate rate of photosynthesis resulting in better yield. A purpose field experiment was conducted to study the effect of gypsum on growth and yield in onion crop. For the six treatments are allocated randomly with four replications using RBD. The results states that the treatment T4 (NPK + 18% gypsum) performed better in terms of seed germination % (62.28%), plant height at 80 DAT (32.14 cm), No. of leaves per plant (11.65 cm), bulb diameter (4.62 cm), bulb weight at 100 DAT (113.63 cm), crop growth rate (70.03 g.m⁻² T⁻¹), average dry weight 12.07(g), bulb protein content (1.6mg/g FW), bulb sulphur content (6.12ppm). Application of sulphur @ 45 kg per ha in form of gypsum may be recommended in onion crop for obtaining higher growth and yield in onion.

Key Words : Onion (*Allium cepa* L.), gypsum, growth and biochemical parameter.