ABSTRACT
The present work comprising the supplementation of chemical and bio-fertilizers for the growth of cluster bean (*Cyamopsis tetragonoloba* (L.) Taub.) by pot experiment. This experiment was carried out to evaluate the effect of chemical fertilizer (Inorganic NPK), bio-fertilizers (*Azotobacter* and *Pseudomonas*) and combined dose of chemical with bio-fertilizers (NPK + *Azotobacter*; NPK + *Pseudomonas*, 1:4 ratio) applied to the plant in a complete randomized block design (CRBD). Various morphological parameters viz, plant height, length of root and shoot, percentage of germination, leaf bio-mass (fresh & dry), number of root nodules and biochemical parameters such as pigment content (Chlorophyll ‘a’, ‘b’ and total Chlorophyll), protein and sugar were performed after 48days of growth. A balanced fertilization strategy that combines the use of chemical, organic or biofertilizer must be developed and evaluated.

KEY WORDS: Cluster bean, *Pseudomonas*, *Azotobacter*, NPK, CRBD