

Effects of Potassium Fertilizer on Bean growth and Yield parameters

ABSTRACT

Bean is globally an important leguminous vegetable that has been used for several centuries as a food for humans. Originated from the American, the bean is now cultivated all over the world due to its nutritional and culinary values. However, it is very sensitive to applied fertilizers. In Mabayi commune of Cibitoke province, many farmers use to cultivate bean without potassium while it is one of the most important nutrients for plant growth and development. An experiment was carried out in completely randomized blocs design with three treatments (T1 (NPK: 00-00-00), T2 (NPK: 18-46-00) and T3 (NPK: 18-46-30)) and four replications for each to evaluate the treatments which could effectively improve crop bean growth and yield parameters. The recorded parameters were the plant height, leaf area, flowers number, stem diameter, root length, yield and production attributes (number of pods, grains, full pods and empty pods). The results highlighted treatment T3 as the most effective treatment. It has significantly improved plant height, leaf area, flowers number, stem diameter, and root length. Moreover, treatment T3 has enhanced the yield and number of pods, grains and full pods. The treatment T3 is suggested for improving the bean growth and yield parameters at Nyabungere hill in Mabayi commune.

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